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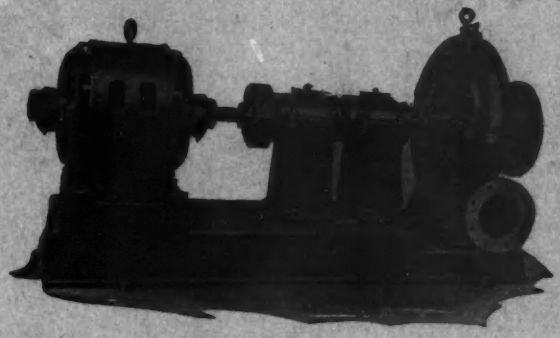

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Here it was fostered, developed, made great
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The pumps are busy handling pulp.
These pumps that have won such great renown
Are manufactured in Frederick-town.

(With apologies to Whittier and Barbara Frietchie)

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALMER, PRESIDENT — GEO. S. MACDONALD, VICE-PRESIDENT & TREAS. — F. K. HOPPIE, SECRETARY

10 EAST 39TH ST. N.Y. U. S. A

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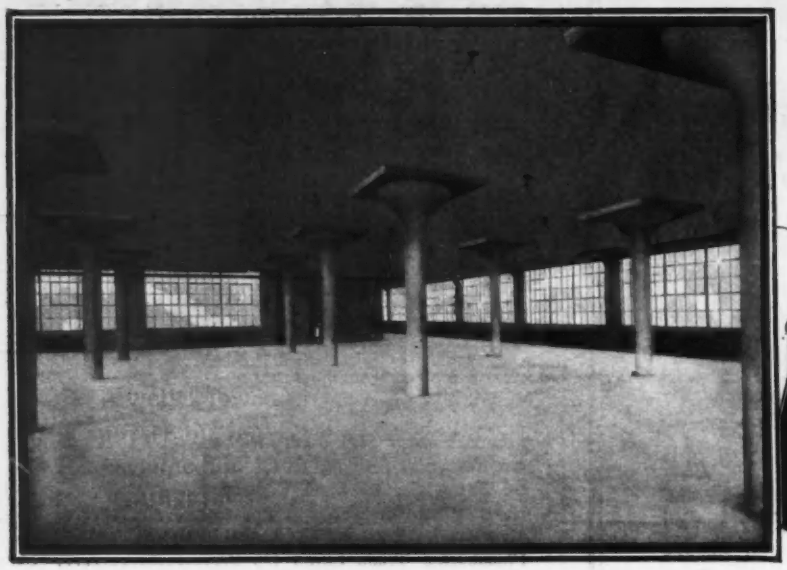
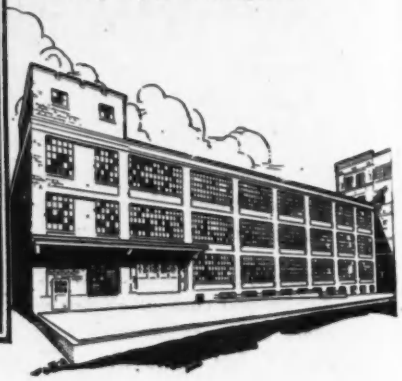
Big Business Builds The Ferguson Way



The Ferguson-built addition to the plant of the Wolverine Supply & Manufacturing Company, makers of Sandy Andy Toys—Pittsburgh, Pa.



"Extras in building are caused by inexperienced engineering and design"

B. F. BAIN, *President, Wolverine Supply & Mfg. Co.*

UNEXPECTED "extra" costs for completing industrial building work have burdened, and even financially embarrassed, many factory men—mainly because of inexperienced planning and design. It was a great relief to Mr. Bain to solve this problem the third time he added to his plant.

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PAPER TRADE JOURNAL

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PAPER

Vol. LXXX. No. 24 Thursday, June 11, 1925

The Magazine of the Paper Industry

American Pulp and Paper Mill Superintendents Meet

Large Attendance at Three Days' Convention Held at Niagara Falls—Members Turn Out Strong for Every Session, Refusing to Be Conquered by the Terrific Heat—E. T. A. Coughlin of the Franklin Coated Paper Co. Elected President—Executive Committee Delegated Power to Decide on Place for Holding the Next Convention—List of Those Attending

From Our Special Representative

NIAGARA FALLS, N. Y., June 6, 1925.—The three days' convention of the American Pulp and Paper Mill Superintendents' Association which closed here today with a sight seeing trip among nature's architectural wonders, was the most successful of any convention yet held by the association.

Over 300 members had registered when the opening session started on Wednesday morning and there was not an idle moment from that hour until the final curtain was rung down at the close of the dinner last evening. The excessive hot weather would have been an excuse for any one to have shirked attendance at the business sessions which were held in the Knights of Columbs Hall but these members had traveled long distances to hear papers read and discussions which they expected would benefit them in their vocations, the result being that there was a surprisingly large attendance at every session.

Proceed on Schedule

There were no dragging moments during the sessions, the entire program being kept up to schedule and all was accomplished on time as planned. The whole proceedings demonstrated the executive atmosphere which surrounds the members of this association when they are at their places of business superintending the production of the world's most stable commodity. The committee in charge of arranging all matters pertaining to this convention, was made up of the following: M. J. Argy, Chairman; William Brydges, F. J. Rooney, F. C. Boyce, Homer Stafford, Robert Bailey, M. T. Lewis. It is entitled to full measure of credit for the smoothness with which every feature of the meeting was carried out. Their efforts required months of hard work and personal sacrifices. It is seldom that any organization has sprung into existence and made as rapid strides, in so short a period of time as has this association and its success has been due to the faith its members have in its purpose and their loyalty in seeing that its principles are carried out.

E. T. A. Coughlin, President

Convention Called to Order

President Nelson R. Davis called the convention to order on Thursday morning, the proceedings being opened with an invocation by the Rev. P. W. Mosher of Niagara Falls, followed by the opening address by President Davis who reviewed the progress of the association, its aims and purposes, and thanking the members for their loyal support during his term of office.

City Treas. E. T. Williams of Niagara Falls, in his address of welcome, distributed the proverbial key to the city, its use of course depending on what direction you entered the city. Response to the Mayor's welcome was made by Fred J. Rooney of the Upson Company of Lockport, N. Y.

The opening formalities being disposed of the convention immediately set about its task of carrying out its program, which introduced John S. Schumaker, who talked on "Humanics and Organization Development." Mr. Schumaker's talk touched a responsive chord among those present and paved the way of expectancy for other good papers to follow. None were disappointed.

A Well Discussed Paper

The next paper by Professor Harry E. Weston of Syracuse

University, "Apprenticeship and Educational Problems," brought forth the greatest discussion of any paper read at the convention. The discussions brought out the attitude of the man who has risen to his present position of responsibility as a result of years of effort and a knowledge gained by practical experience as against the one who wants to assume responsibilities and possessing only an academic training. It developed, during the discussion of Mr. Weston's paper, that there is a growing tendency to develop men from the inside of the plant for positions of responsibility, affording any who so desire the opportunity of acquiring the university course, while obtaining his practical knowledge through working in the plant.

Other Speakers on Thursday

Others who spoke during Thursday's sessions and their subjects were:—W. C. Heckeroth, "Pulverized Fuel"; R. W. Teeper, "Power Problems"; W. D. Sommerville, "Bonds, Writings and Fine Papers"; Dr. Hugh P. Baker, "Future of the Industry and Forestry"; H. G. Funsett, "Straw and Coarse Papermaking"; George S. Anderson of The Niagara Falls Power Company who gave an illustrated talk on "Engineering Problems."

Dr. Baker's Address

Dr. Baker in his address said:—

"The individual states of the Union, and this applies more to New York State than to any other because the biggest opportunity for the practice of forestry in America is in this state, should be required to apply the same businesslike methods in the handling of state forests that are now required of private owners of timberlands in connection with the taxing of these lands by the states and the federal government.

"New York State, with its great area of state owned forests, in conjunction with the federal government, requires private owners to set up a capitalization value on their forests and other properties and is insisting that these properties be handled in a businesslike way. The federal government and the individual states should be similarly required by the public to handle publicly owned forest resources in the same businesslike way.

"The public—the stockholders in state owned forests—is entitled to have the same kind of a report on the operations of its property as the executives of a business or an industry are expected to render to the stockholders in their enterprises. We are demanding that our forest areas be protected from fire that they may have increasingly greater value for continuous production of wood, for recreation, etc., and in maintaining forest areas for these uses great sums of money have been spent on non-productive forest areas and in such a way that it has been out of the question for the public to know whether these moneys have been spent in a businesslike way or not.

"Our forests, fortunately, are a renewable resource and to renew them properly and make them continuously productive is one of the greatest economic problems facing this country. Forestry is no longer a sentimental idea. It is as much an economic problem as is agriculture. The time has come when trees can be grown for profit and idle land whether owned by the state or the private owner is as wasteful as an idle man. The state should practice what it preaches to the private owner of timberlands."

B. T. McBain, Second Vice-President

Homer Stafford, First Vice-President

H. W. Server, Third Vice-President

The Annual Banquet was held on Thursday evening at the Hotel Niagara. John J. White of Holyoke, acted as toastmaster.

President Norman W. Wilson of the American Paper and Pulp Association, paid the superintendents a fine tribute, complimenting them on the character and growth of their organization, their attendance at the business sessions and impressed them with the fact that each superintendent was an important branch of his company.

Mr. Wilson had found the business meetings so interesting that he attended all of Thursday's sessions.

A. Munro Grier Speaks

A. Munro Grier, President of the Canadian Niagara Power Company, spoke on industrial development along the Border and urged the continuance of the present cordial relations which exists between the United States and Canada, urging that both were essential to the future success of each other.

R. H. Laftman, Fourth Vice-President

L. D. Post urged the superintendents and purchasing agents in the industry to discontinue buying foreign made products which the speaker realized could not be carried out in toto.

Peter J. Massey, Treasurer

Charles M. Newcomb kept the banqueters in an uproarious state during his talk on the "Psychology of Laughter," and wound up a most pleasant evening with everyone in a happy mood as a result of the contagion he spread among them. Yesterday's sessions were taken up with the reading and discussions of the following papers:—Continuous Grinding, American Voith Contact Company; Recording Devices, Tom Harvey; Papermaking Problems, Homer H. Latimer; Asbestos Dryer Felts, H. N. Hill Company; Newsprint Paper in North America, R. S. Kellogg, Secretary of Newsprint Service Bureau; Business and Economics, A. T. Simonds; Ground Wood Pulp, Adolph F. Meyer; Yield per Cord of Various Woods in the Sulphite Process, G. J. Armbruster.

Mr. Kellogg's Address

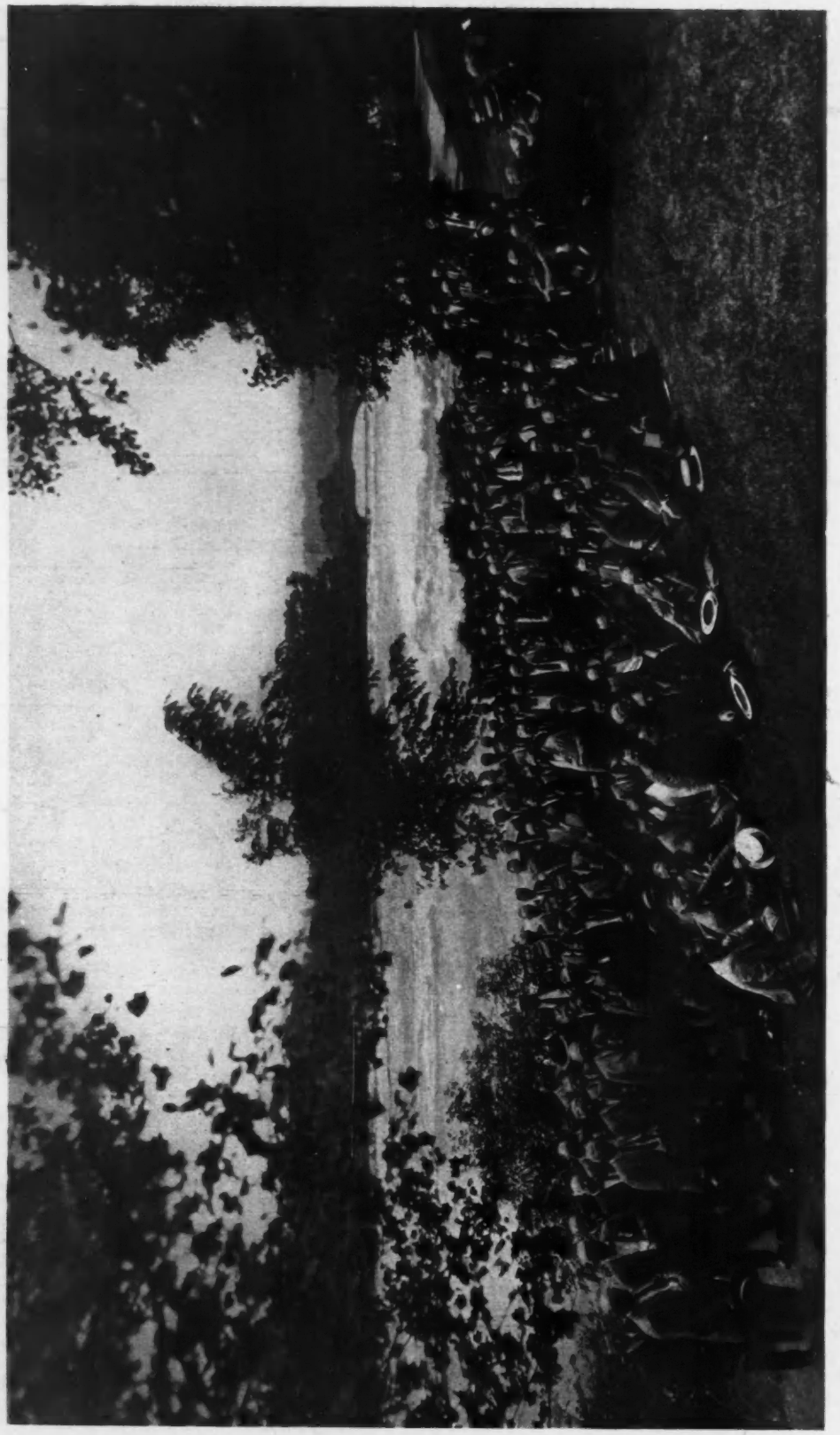
Mr. Kellogg, in his address, said in part:—

"During the first four months of this year, the news print mills in North America made more than a million tons of news print paper and it looks as if the total for 1925 would set a new high mark beyond three million tons out of a world production of five million tons. The North American industry now has a capacity of 11,000 tons of news print daily and new machines totaling 1,500 tons additional capacity are under construction, to say nothing of other projects less advanced." He continued, "This means an increase of nearly 100 per cent in a period of eight years, and is a remarkable development even on a continent which has always done big things.

William Brydges, Fifth Vice-President

R. L. Eminger, Secretary

"The United States mills are making about the same quantity of news print as in 1920, but the Canadian output is 70 per cent ahead of 1920, while 1925 marks the entry of Newfoundland as a big factor in the news print situation with two mills of nearly 700 tons



PICTURE TAKEN AT THE ANNUAL CONVENTION OF THE AMERICAN PULP AND PAPER MILL SUPERINTENDENTS' ASSOCIATION, NIAGARA FALLS, N. Y., JUNE 4-6, 1925.

a day combined capacity. Mexico has made about 40 tons a day of news print with little change for many years.

"The Canadian production in the first four months of 1925 was slightly more than during the entire year of 1915, and the 1925 total will probably equal that of the United States for the first time. So far as there is any means of determining, it looks as if from 1926 on, Canada would be the world's greatest producer of news print paper.

"The consumption of news print paper is constantly going up to new totals," said Mr. Kellogg, "and the amount used in the United States this year will be practically equal to the combined production in the United States and Canada. Exports of news print from the United States have almost vanished. Not much is sent overseas from Canada under present conditions of world competition and overseas imports into the United States are about the same as home consumption in Canada.

"In 1810 the Census takers found 200 paper mills in the United States, which made a total of 3,000 tons of all kinds of paper, or an average yearly output of 15 tons each. Now we have several machines which have passed the 100 ton a day mark, and still larger ones are building. We had one-seventh of a pound of news print paper per capita available for consumption in 1810. Now we have 50 pounds. There is no more significant figure than this with respect to the part which newspapers have played in the development of the continent.

"The strongest and most permanent competitors of the North American pulp and paper mills are in Scandinavia and Finland," warned Mr. Kellogg. "This is because the people in those countries long ago learned the vital importance of protecting their forests and harvesting no more than the equivalent of the annual growth. We must do the same if we are to continue to have sufficient raw material for paper making."

Election of Officers

As the curtain was being rung down on the sixth Annual Convention, the nominating committee reported on the following selection for officers for the ensuing years and all were unanimously elected:—President, E. T. A. Coughlin, Franklin Coated Paper Company; First Vice-President, Homer Stafford, Knowlton Bros., Inc.; Second Vice-President, B. T. McBain, Columbia River Paper Mills; Third Vice-President, H. W. Server, Miami Paper Company; Fourth Vice-President, R. H. Laftman, Bogalusa Paper Company; Fifth Vice-President, William Brydges, Defiance Paper Company; Treasurer, Peter J. Massey, W. F. Hall Printing Company; Secretary, R. L. Eminger, Miami Paper Company.

The selection of Mr. Coughlin for the Presidency was the reward for untiring effort and unselfish interest which he has taken in the organization since its inception. Mr. Coughlin has been enthusiastic in his work in behalf of the association and single handed has accomplished much in the creating of new divisional branches of the association.

The resolutions committee, through Fred C. Boyce, its chairman, presented a resolution whereby officers should be elected for a a term of only one year which was unanimously accepted.

Executive Committee Instituted

The question of location for holding of the next convention was left to the judgment of the executive committee, with the suggestion that large cities should be eliminated from consideration. Several manufacturers took advantage of the opportunity to display their products, among them the Fulton Engineering Company of Middletown, Ohio, which had an installation of the Fulton Dryer Drainage system as applied to Paper machines. This exhibit was constantly visited by the mill men who expressed a keen interest in the forced steam circulating system which is the invention of William B. Fulton the general manager of the company. The Valley Iron Works of Appleton, Wis., exhibited a miniature of a new Beating Engine which they are manufacturing. The Barret-Cravens Company of Chicago exhibited a new Lift Truck with Steeleg Platforms. Souvenirs were given to those attending by Fulton Engineering Company—cigarette case containing cigarettes; Lindsay and Niagara Wire Weaving Companies—a pocket size microscope; Ohio Knife Company—playing cards; Shuler-Benninghofen Company—a pocket knife; Crane Company of Chicago—leather bound memo books with fillers. Among those attending the convention were the following:

A. G. Adams, Chicago; W. A. Anderson, Crabline Mill, Quebec; C. K. Andrews, Grand Rapids, Mich.; H. J. Andrews, Fort Wayne, Ind.; Wm. J. Argy, Black River, N. Y.; Wm. P. Argy, Turners Falls, Mass.; G. J. Armbruster, Edmunston, N. B.; A. J. Allison, Dayton, Ohio; Ross Auril, Middletown, Ohio; L. N. Austin, Otsego, Michigan; I. F. Ataney, New York City; M. E. Arthur, New York City; M. E. Avery, New York City.

Edwin C. Babbitt, Fitchburg, Mass.; E. S. Baker, Rock City Falls, N. Y.; Dr. Hugh P. Baker, New York City; M. J. Baker, No. Leominister, Mass.; F. E. Bardrof, Cleveland, Ohio; Joseph Bario, Holyoke, Mass.; F. L. Barstow, Fitchburg, Mass.; A. L. Beals, Newark, Delaware; E. N. Bechard, Belleville, N. J.; Clarence Beebe, New York City; Geo. F. Begnal, Saratoga Springs, N. Y.; Harry Bennett, New York City; B. Benson, Elkhart, Ind.; Henry Bert, Monroe, Mich.; Robert Best, Kalamazoo, Mich.; John Bingham, Philadelphia, Pa.; B. M. Bishop, Middletown, Ohio; W. E. Blauvelt, Brooklyn, N. Y.; J. E. Blosser, Chester, Penn.; L. M. Booth, Elizabeth; J. G. Bowers; F. C. Boyce, Wausau, Wis.; P. D. Bradley, Green Bay, Wis.; A. O. Bragg, Niagara Falls, N. Y.; L. H. Breyfogle, Kalamazoo, Mich.; A. E. Bridge, Middletown, Ohio; Wm. S. Brooks, Canton, N. C.; M. B. Brooks, Miamisburg, Ohio; Wm. E. Brown, Medford, Mass.; H. C. Buffum, Buffalo, N. Y.; W. H. Burns, Appleton, Wis.; Harry C. Busser, York Haven, Penn.; W. M. Benzing, Canton, N. C.; C. T. Buss, Thorold, Ont.; Paul Buss, Thorold, Ont.; Harold Bing, Sandusky, Ohio.

James A. Cameron, Brooklyn, N. Y.; T. A. Cape, Hamilton, Ohio; J. R. Carter, Tama, Ia.; Wm. M. Cary, Braithwaite, La.; J. M. Cathcart, St. Catharines, Ont.; O. T. Chalon, New York City; Charles Champion, Adams, Mass.; W. J. Clarke, Quebec; John Cornell, New York City; A. S. Cosler, Chicago, Ill.; A. P. Costigane, Toronto, Ont.; E. T. A. Coughlin, Montclair, N. J.; Thomas Coyle, Niagara Falls, N. Y.; W. H. Croft, Turners Falls, Mass.; T. L. Crossley, Toronto, Ont.; Charles L. Crowley, East Walpole, Mass.; P. J. Curran, Wheelwright, Mass.; C. Newton Candee, St. Catharines, Ont.; D. H. Cameron, Merriton, Ont.

N. R. Davis, Cumberland Mills, Maine; W. L. Davis, Jr., Eau Claire, Wis.; J. E. Daley, Port Huron, Mich.; D. B. Davie, Green Bay, Wis.; V. S. Denison, Sandusky, Ohio; P. F. Denner, Kalamazoo, Mich.; H. E. Dennie, Chicago, Ill.; H. J. Desmond, Waterville, Maine; Robert Douglas, New York City; J. H. Dow, Belleville, N. J.; F. W. Drake, Boston, Mass.; Edward Driscoll, Lee, Mass.; T. L. Dunbar, Watertown, N. Y.; H. J. Dubuc, New York City; T. A. Dial, New York City; A. C. Dunham, New York City; Jos. H. Durkin, Chattanooga, Tenn.

E. E. East, Plainville, Mich.; W. F. Ebbing, Cincinnati, Ohio; B. P. Edwardes, Madison, Wis.; I. Ekholm, Brooklyn, N. Y.; Cl. Ellis, Downington, Penna.; R. L. Eminger, Miamisburg, Ohio; T. L. Eminger, Miamisburg, Ohio; R. S. Engelhardt, New York City; H. E. Eurich, Otsego, Mich.; L. H. Everlien, Appleton, Wis.; Jacob Edge, Downington, Penna.

H. Fair, Merritton, Ont.; Otto F. Fischer, Kalamazoo, Mich.; A. C. Ford, Dayton, Ohio; James Foxgrover, Kalamazoo, Mich.; L. A. Fralick, Ogdensburg, N. Y.; H. D. Frost, Cleveland, Ohio; H. G. Funsett, Cedarville, Ohio; W. B. Fulton, Middletown, Ohio; Jos. A. Fux, Brantford, Ont.; M. C. Fleming, New York City.

O. P. Gephart, Miamisburg, Ohio; Edw. W. Gibbins, Lee, Mass.; H. M. Grady, Haileybury, Ont.; John W. Gregor, Newton Falls, N. Y.; W. D. Gould, Philadelphia, Penna.; Robert M. Guie, Phila-

delphia, Penna.; M. J. Guild, Richmond, Va.; J. S. Gulledge, Akron, Ohio; M. C. Gillicuddy, Ontario.

W. M. Hannum, East Liverpool, Ohio; Arthur Harvey, Middletown, Ohio; Robert Hayden, Lee, Mass.; J. L. Hayes, Peoria, Ill.; W. C. Heckeroth, Erie, Penna.; Frank R. Henry, Dayton, Ohio; John Hercher, Menasha, Wis.; E. S. Hinman, Spring Grove, Penna.; A. M. Hinkson, Dayton, Ohio; Harold Holden, Stoneham, Mass.; H. A. Horstmann, New York City; W. C. Hurley, Coldwater, Mich.; Wm. F. Hussey, Waterville, Maine; Allan Hyer, Hamilton, Ohio; L. S. Henry, Pyrites, N. Y.; Mr. Humphrey, Wausau, Wis.; Mr. Hunt, Wausau, Wis.

H. W. Illig, East Aurora, N. Y.; T. H. Ireland, Long Island, N. Y.

H. S. Jarvis, Toronto, Ont.; E. S. Jenkins, Cedar Grove, N. J.; R. W. Jenkins, Hamilton, Ohio; C. H. R. Johnson, Hamilton, Ohio; Frank Johnson, Harrisville, N. Y.; Arthur E. Jones, Syracuse, N. Y.; E. J. Johnstone, Holyoke, Mass.

H. E. Karberg, Merriton, Ont.; F. A. Karls, Canton, N. C.; R. H. Keely, Rothschild, Wis.; R. S. Kellogg, New York City; Thomas J. Keenan, New York City; W. A. Kelly, Green Bay, Wis.; A. J. Kennedy, Hudson Falls, N. Y.; C. H. Kent, Springfield, Mass.; J. F. M. Kenzie, Toronto, Ont.; C. H. Kephart, York Haven, Penna.; A. D. Kernin, Mosinee, Wis.; George D. Kilberry, Downington, Penna.; H. C. Kinne, Watertown, N. Y.; C. E. Kinney, Wilmington, Del.; K. T. King, Wilmington, Del.; L. F. Knickerbocker, Port Arthur, Ont.; Edward Kormin, Chicago, Ill.; M. Kutz, New York City; W. H. Kilby, Montreal, Que.; M. R. Kolp, Philadelphia, Penna.

Benj. T. Larrabee, Cumberland Mills, Maine; R. H. Leeher, Dayton, Ohio; A. Lendle, New York City; W. T. Libby, Berlin, N. H.; J. E. Lind, Erie, Penna.; A. G. Lindner, Elkhart, Ind.; Herbert Lippitt, New York City; J. E. Lippman, Holyoke, Mass.; R. B. Livermore, Austin, Penna.; Jos. E. Loughead, Kalamazoo, Mich.; Arthur Lowe, Ridgefield, N. J.; F. H. Lueders, Dayton, Ohio; F. C. Ladd, Dalton, Mass.; Otto J. Lelopp, Erving, Mass.

Russ McCandless, New York City; W. F. McClellan, St. Marys, Ohio; R. K. McCluskey, New Haven, Conn.; Roger M. McCorkindale, Holyoke, Mass.; A. McIntyre, Windsor Mills; W. G. MacNaughton, New York City; A. McVie, Kalamazoo, Mich.; Ed. McWhite, Georgetown, Ont.; Wm. Mackey, St. Raymond, Quebec; C. E. Macklem, Beloit, Wis.; C. J. MacLean, Norwood, Mass.; M. J. Maguire, Albany, N. Y.; E. K. Mansfield, New York City; Louis Marcovitz, New York City; T. Martell, St. Raymond, Quebec; John P. Martin, Garfield, N. J.; G. F. Martin, Garfield, N. J.; Peter J. Massey, Chicago, Ill.; H. E. Maul, Bogota, N. J.; Thomas Mellor, New York City; A. F. Meyer, Minneapolis, Minn.; J. J. Meyer, Minasha, Wis.; Don H. Montville, Middletown, Ohio; H. J. Moody, Dalton, Mass.; Chas. N. Mooney, Lee, Mass.; J. F. Morall, Bogalusa, La.; C. G. Morgan, Buffalo, N. Y.; Geo. E. Morrill, Chicago, Ill.; T. H. Morrissey, Hamilton, Ohio; Andrew Muirlhead, New York City; F. S. Murphy, Appleton, Wis.; John A. Murray, Fitchburg, Mass.; J. M. Murray, Bogalusa, La.; F. J. MacNullen, Lockport, N. Y.; John McHugh, Ancram, N. Y.; A. McLintock, New York City; K. S. Mailaithlan, St. Catharines, Ont.; M. A. Mannion, Niagara Falls, N. Y.; Herbert McKay, St. Catharines, Ont.

A. G. Natwick, Merriton, Ont.; N. J. Niks, Chillicothe, Ohio; R. A. North, Green Bay, Wis.; C. H. Noble, Kalamazoo, Mich.

John J. O'Brien, Boston, Mass.; Jos. O'Donoghue, St. Catharines; Heth Owen, Richmond, Va.

W. S. Paden, Big Rapids, Mich.; W. E. Packard, Hammermill, Penna.; Jacob Parent, Kalamazoo, Mich.; M. F. Parsons, New Orleans, La.; H. C. Parsons, Turners Falls, Mass.; S. Partinglor, Greenwich, N. Y.; D. D. Piller, Brooklyn, N. Y.; J. J. Pokorney, Detroit, Mich.; T. M. Pomeroy, Dalton, Mass.; G. H. Pountain; L. D. Post, New York City; Max V. Poyck, New York City; Carl Preston, Elkhart, Ind.; Ross Puette, Richmond, Va.; M. W. Phelps, Merriton, Ont.

C. T. Rasden, Beloit, Wis.; James G. Ramsey, Philadelphia, Penna.; Chas. E. Raney, Circleville, Ohio; G. F. Reale, New York City; M. Redmond, Kalamazoo, Mich.; H. C. Reiner, Chicago, Ill.; J. J. Reynolds, Bogota, N. J.; E. E. Reynolds, Detroit, Mich.; Homer M. Rice, Watertown, N. Y.; Carl F. Richter, Easton, Penna.; Thos. N. Rider, Glens Falls, N. Y.; N. Rigabar, Carthage, N. Y.; J. Adam Ritz; Franklin, Ohio; F. W. Roberts, Lockport, N. Y.; J. R. Roberts, Wilmington, Del.; Wm. J. Robertson, New York City; C. P. Robinson, New York City; H. E. Lockwood, Carthage, N. Y.; Evert Rolict, Peoria, Ill.; Geo. Roschek, Joliet, Ill.; J. O. Ross, New York City; K. P. Royce, Fulton, N. Y.; John D. Rue, Madison, Wis.; J. W. Raines, Thorold, Ont.; T. Ritz, Newark, Del.; J. W. Rosenbach, Buffalo, N. Y.

J. Salter, Fulton, N. Y.; T. H. Savery, Chicago, Ill.; J. S. Schumaker, Lincoln, N. H.; D. E. Scott, Chagrin Falls, Ohio; W. H. Scott, Dayton, Ohio; N. B. Scott, Springfield, Mass.; R. E. Sears, Middletown, Ohio; H. W. Server, Dayton, Ohio; V. Shean, Harrisville, N. Y.; W. E. Sheehan, Albany, N. Y.; Edw. Simonson, Buffalo, N. Y.; W. L. Simpson; Amos Simpson, Pyrites, N. Y.; Jos. H. Slater, Escanaba, Mich.; Richmond Smith, Walpole, Mass.; J. Smith, Sr., Middletown, Ohio; X. B. Smith, Chicago, Ill.; W. M. Smith, Philadelphia, Penna.; W. D. Somerville, Bangor, Mich.; O. G. Squires, Hamilton, Ohio; Homer E. Stafford, Watertown, N. Y.; B. K. Steadman, Richmond, Va.; Geo. W. Sterrett, Marseilles, Ill.; R. C. Stewart, Middletown, Ohio; E. H. Stoddard, Appleton, Wis.; J. J. Sullivan, Taylorville, Ill.; A. H. Sutherland, York, Penna.; E. L. Stansel, Mille Roches, Ont.; Howard Stansell, West Carrollton, Ont.

Alden R. Taylor, Boston, Mass.; A. A. Tanyane, PAPER TRADE JOURNAL, New York City; W. H. Theroux, Chicago, Ill.; C. M. Thompson, Niagara Falls, N. Y.; R. V. Thrope, Woonsocket, R. I.; Harry, Toole, New York City; C. W. Trabue, Brooklyn, N. Y.; G. W. Trepp, Watertown, N. Y.; V. V. Troyer, Constantine, Mich.; E. L. Tewksbury, Newton Upper Falls, Mass.; L. A. Thompson, Holyoke, Mass.

A. M. Vanderberg, Elkhart, Ind.; George Voght, Mosinee, Wis.

Geo. K. Walk, Glens Falls, N. Y.; D. J. Walsh, Lincoln, N. H.; D. F. Warren, Dexter; J. J. Warren, Brownsville, N. Y.; R. T. Warren, Brownsville, N. Y.; R. N. Watts, Springfield, Mass.; L. E. Weiser, New Haven, Conn.; L. V. Welch, Fitchburg, Mass.; S. C. Wentz, Spring Grove, Penna.; C. D. Werstler, Akron, Ohio; W. B. West, Pittsfield, Mass.; W. Weston, Syracuse, N. Y.; F. M. Wilhound, Watertown, N. Y.; M. M. Whitman, Wausau, Wis.; F. A. Whittiger, Chicago, Ill.; W. Whyte, Montreal, Que.; E. H. Wiblitt, Richmond, Va.; Wm. H. Wightman, Vicksburg, Mich.; A. G. Wightman, Kalamazoo, Mich.; A. F. Wilcox, Chicago, Ill.; Lee L. Wilson, Morris, Ill.; F. E. Winslow, Philadelphia, Penna.; James H. Wright, Kalamazoo, Mich.

O. V. Yates, Bridgeport, Pa.; J. H. Yordy, Urbana, Ohio; G. H. Young, Middletown, Ohio; C. E. Youngchild, Nekoosa, Wis.; W. A. Yule, Albany, N. Y.

H. C. Hanson Resigns from Certainteed Corp.

[FROM OUR REGULAR CORRESPONDENT.]

NIAGARA FALLS, N. Y., June 9, 1925.—Harry C. Hanson, mill superintendent for the Niagara Falls plant of the Certainteed Products Corporation has resigned to take a position as general superintendent of the Wilmington, Ill., plant of the Orendo Corporation of Chicago. Before his departure from Niagara Falls, the employees of the Certainteed Products Corporation gave him a beautiful white gold watch and chain as a testimonial of the esteem in which they held him.

Box Board Association to Meet June 16

CHICAGO, June 8, 1925.—The Box Board Association will hold its next regular meeting at 11 o'clock Tuesday, June 16, at the Congress Hotel, Chicago.

Rumors Regarding Merger Still Persist in Montreal

George H. Mead Said to be Slated to Become Head of Merged Companies—Fraser Companies to Tackle News Print Mill at Edmundston Next—St. Regis Paper Co. Said to Contemplate Immediate Construction Work at Cap Rouge—International Sells Grand Falls Power Rights.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., June 8, 1925.—Rumor is still active here with regard to the proposed merger of the Spanish River and Abitibi Company, which is now stated to be well advanced towards consummation. It is stated that George H. Mead, President of the Spanish River Pulp and Paper Mills, will be the active executive at the head of the merged companies and it is further stated that the new company will have a capitalization of approximately $75,000,000, some of which will be floated in New York and some in London. At the present time, no less than 54 per cent of the Abitibi stock is controlled by New York interests. Meanwhile the Abitibi Power and Paper Company has taken over the power plant of the Hollinger Gold Mines at Island Falls and has formed a subsidiary company, to be known as the Abitibi Electric Development Company. This company will make an issue of $1,600,000 of securities to be guaranteed by the Abitibi Power and Paper Co. The power plant was designed for four units, with a total of 50,000 h.p. Of these, only two units have been so far developed and the two remaining units will be developed forthwith. Thus the Abitibi Company will control a total of 105,000 h.p.; their present development at Twin Falls and Iroquois Falls being 55,000 h.p. The new power will enable the company to increase its news print capacity from a little over 500 tons daily to 800 or 900 tons. While this programme has been definitely determined upon, it has not yet been decided when the new news print units will be undertaken. In the meantime the additional power can readily be used by the company for the manufacture of steam, thus replacing a large quantity of coal used at present for this purpose.

Timber Limits Sale

With the Quebec Government's announcement a few days ago that 3,000 square miles of timber limits would be leased by auction toward the end of the present month, it was stated that the lease would be the largest of its kind ever registered in this province. This record is now to be broken, it being the Government's intention to add 2,000 square miles of timber limits to those already set aside for auction. These last are understood to be situated in the Lake St. John district. It is understood that the Government's intention is to furnish sufficient lumber so that the mills of the province can operate to capacity.

The St. Regis Paper Co.

Though no official declaration is yet available from the St. Regis Paper Company, it is learned from a reliable source that it is intended by that company, to start without delay the construction of its projected mills at Cap Rouge, near Quebec. For months there have been reports along that line, but it appears now that the company has completed its arrangements, and that the large lands it purchased last year will be utilized for such construction in the immediate future. As far as can be ascertained the greatest part of the pulpwood which will be available for this company will come from the Escalana River in the Abitibi region, being conveyed to the mills of the company by the Transcontinental. Permanent employment to several hundred men will be provided by the operation of this new plant.

Spanish River's Western Mill

From Winnipeg it is reported that keen disappointment is being felt that the new pulp mill to be erected in Manitoba by the Spanish River Pulp and Paper Mills is apparently not to be located in the neighborhord of that city. The limits from which the wood is to be obtained lie on the east side of Lake Winnipeg, and consequently the site at Fort Alexander, is believed to be the one which the promoters have in view. Those who have been interested in the project, however, have not despaired of securing the industry for this city, and every pressure has been brought to bear on the promoters with this end in view.

News Plant for Fraser Companies

It is understood that the next project of the Fraser Companies Limited, Edmundston, N. B., will be the construction of the news print paper mill in New Brunswick. The firm is now putting up a large mill in Madawaska, on the Maine side opposite Edmundston, and New Brunswick will be the next site for such an undertaking. Archie Fraser, president and general manager of the Fraser Companies, in a recent interview stated that the proposition would naturally be dependent upon cheap power being available which means, of course, the development of the Grand Falls. Then, he added, the future of the paper industry was another consideration. A one-machine paper mill requires 14,000 h.p. At the lowest possible estimate a news print mill requires 1,400 h.p. of electrical energy, and the Fraser Company's plans are regarded as the explanation of financial interests with which they are allied for a block of 20,000 h.p. from Grand Falls, to which Premier Veniot referred during the recent session of the New Brunswick Legislature.

Sells Rights in Grand Falls, N. B.

The International Paper Company has disposed of its rights to the Grand Falls power site situated on the St. John River in New Brunswick. For several years the International Power Company has been a two-thirds owner of the development rights of this valuable site, but, the province now plans a development approximating 50,000 h.p. at this point on a public ownership basis at an outlay of $9,000,000. The International Paper Company has made a settlement with the government in return for its power rights. It is believed that the offer of the government, while slightly lower than had been expected, was accepted by the company in order that this site, which had long been unproductive, might be developed.

Memorial to the late H. F. Anson

At Iroquois Falls, Ont., last week, there was unveiled a memorial to the late H. F. Anson, former president of the Abitibi Power and Paper Company. Madame Anson, mother of the late president of the Abitibi Power and Paper Company, pulled the cord which allowed the drapery to fall away from the monument, leaving it exposed to public view for the first time since the last details were completed. The unveiling ceremony consisted of a short service, with an address by Alexander Smith, president of the company, and the late president's closest friend.

Survey of Straw for Paper Making

John Bache-Viig, inventor of process for converting straw into paper-pulp, has been retained by the Alberta Government to make an economic survey of the straw resources of the province, with a view to the development of the industry in Western Canada. Excellent paper has already been made from Alberta straw under the Bache-Viig process. It is hoped that Mr. Bache-Viig's survey will point the way to the establishment of a new industry in Alberta.

Hot Weather and Holiday Slow Up Philadelphia Trade

Engravers Supplies Now Enjoying Brisk Seasonal Demand—Plans Being Made for Quarterly Meeting of Waste Merchants—Waste Products Co. Passes Into New Ownership—International Paper Co. Moves to Pennsylvania Building—Two Paper Companies Suffer Fire Loss.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., June 8, 1925.—Hot weather and the short business week of the holiday period of course had a deterring effect upon the paper markets generally.

With the approach of the semi-annual closing of accounting records and the reckoning of the first half year's business, there is a better demand in the fine paper group for those grades used in the manufacture of bookkeeping supplies, loose leaf forms and other writings used by the stationers and printers engaged in the manufacture of these specialties. All the large stationers report a decided betterment in the manufacturing branch of the industry due to the winding up of the half year's business period. Engravers supplies in announcements, cards and folders have been moving in fairly well maintained volume during the present seasonal activity, a forerunner of the coming Wedding and Commencement days.

Coarse Papers Less Actve

The brief business week brought about a quieter market for the coarse papers although it is anticipated that there will be more active demand as soon as the summer is under way, in preparation for the resumption of the manufacture of Fall requirements in the textile, clothing and other merchandise which are in normal times most active throughout the mid-summer. Tissue Manilas have been dropping gradually in prices until they have seen a 20 per cent reduction with the commoner grades striking the lowest levels.

An exceedingly dull market for the various grades of paper and rag stocks has been responsible for the break in prices of papers and a few rags within recent days. All along the line in paper stock there has been a revision to lower levels.

Waste Merchants to Hold Meeting

A combined social and business gathering will be included in the program of the quarterly meeting of the Philadelphia Association of Wholesale Waste Merchants to be held at the Majestic Hotel on Thursday of this week. There will be assembled in this closing session of the season more than forty members comprising the various branches of the waste trade and including the rag, paper, waste and rubber divisions which, during the past year, combined into the present Wholesale Waste Merchants Association although the parent organization, the Philadelphia Paper Stock Dealers' Association, had for many years been the only organized branch of the industry.

Waste Products Co. Under New Ownership

Through the transfer of the various branches of the Universal Waste Products Company to new owners, that firm's business in the local territory is now being conducted as two entirely distinct concerns. The Philadelphia main plant and offices have been taken over by a company of which William G. Biles is head and which will be known as the Biles and Berman Company. Associated with Mr. Biles, who for 13 years was manager of the Universal Company, is Barney Berman, for the past five years an employee of the old concern. The Philadelphia plant of the Universal Company is located at 620 S. 15th street. The Wilmington Branch at 710-720 E. Fifth street has been absorbed by the Penn Paper and Stock Company, 240 N. Front street of which William J. McGarity is head. The Delaware Branch of the Company takes care of the territory in Wilmington, Chester, Elkton, Newark and other centers contiguous to that district. It will continue under the management of Louis Bennett who has been in charge of the branch ever since it was opened three years ago. The Universal Company, which enjoyed an extensive paper stock business in this territory and which controlled a fleet of 14 barges plying between Philadelphia and New York and points along the Delaware River and Raritan Canal, announced upon the disposition of its business interests that it could not secure a suitable property for the handling of its paper stock shipments where proper docking facilities were provided. The old quarters of the company at 24th and Callowhill streets, covered a considerable area of ground and, with the condemnation of the site by the City of Philadelphia for Park purposes, the Universal was obliged to surrender all its docking privileges along the Schuylkill. Since the condemnation proceedings more than three years ago it has been seeking another site where its fleet of barges could find wharfing accommodation on the inland water ways. The company was organized in the war days and had as its president, J. M. Walsh. The Delaware River Wharf at which the barges now dock will be supervised by William P. Ryan who has been managing the Universal Company's Pier 78 for the past year or more. The shipping interests of the present owners will be taken care of under the supervision of Manager Ryan who will continue the Barge traffic on the extensive scale of the past.

International Paper Co. Removes Offices

The Philadelphia sales offices of the International Paper Company, formerly located in the Victory Building, have been removed to the Pennsylvania Building. The International Company's extension of its Quaker City sales organization necessitated the acquisition of the larger quarters in the Pennsylvania Building. There are now three members associated with the local sales organization including Manager Fred W. Rowley, J. Spencer Brock, formerly of the Fiester Owens Company, and Vernon R. Schroff who until joining the International Company was engaged in business on his own account with offices in the Drexel Building.

William Mann Mills Being Dismantled

Having several months ago discontinued the operation of the Lambertville, N. J. mills of the paper manufacturing department, the William Mann Company, whose Philadelphia headquarters are located at 529 Market street, is now disposing of its mechanical units through sale. Among the purchasers of the equipment was Harvey Garrett, president of the Edwin T. Garrett Company, manufacturers of tissues and specialties, Lansdowne, Pa. The Garrett Company took over the slitting equipment of the Mann Mills and has now inaugurated a slitting department in its own mills for the manufacture of copying and duplicating papers along the same lines as those formerly manufactured by the Mann Company. The Garrett Mills also are now engaged in production of basic papers such as manifolds and copying tissues. The largest slitting machine is 40 inches.

Bayless Mfg. Corporation Adds to Lines

William Low, of the Bayless Manufacturing Corporation, Austin, Pa., dusing the week called on the local trade and introduced among the newest of products of the company its fine sulphite bonds. The Bayless Company has been manufacturing these bonds at intervals throughout the past year or more and is again in the field with these specialties in addition to its line of water finish fibers and Krafts.

Twilight Baseball Contests

Institution of a series of twilight baseball contests was effective of much enthusiasm in the trade, through the first of these games

(*Continued on page* 38)

Toronto Reports the Pulpwood Business As Very Dull

Price Obtainable Much Lower Than a Year Ago and Transactions are Practically Without Profit—New Ontario Colonization Co. Claims Compensation from Province—Work Starts on Pulp Plant on Manitoulin Island—Hon. E. J. Davis Speaks for Pulpwood Embargo.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, June 8, 1925.—The pulpwood business is very dull at the present time, according to a Toronto dealer, who states that last year fire killed spruce, bought north of North Bay in Ontario, was sold, delivered, to mills in New York, Pennsylvania and other states, at $20 per cord, and sap-peeled wood at $23. This year the highest that is being offered is $15 and most dealers are not handling any wood on this basis as they say that every transaction means a loss. The lowest figure at which they can obtain wood in the North is $10 per cord, f.o.b. cars, for clear spruce and about $9 to $9.50, with a percentage of balsam.

Most of the mills south of Lake Ontario are calling for 90 per cent spruce in their contracts and as $10 is the prevailing price, f.o.b. cars, and as the freight averages $8 to $9 from Hearst and other nearby Ontario points there is no way for the operator to make any profit on the deal. In fact, until the mills are prepared to offer a better price or freight rates are reduced, most pulpwood handlers, according to the information received, are not over-enthusiastic regarding prospects.

Colonization Firm Sues Government

Sir William Hearst, former Premier of Ontario, was a witness recently in the trial in Toronto of a petition of right in which the New Ontario Colonization Company, of Buffalo, whose Ontario headquarters are at Jacksonboro, claims compensation and damages from the province of Ontario for alleged breach of contract under which, it is alleged, the company paid the Government $98,000 and spent half a million dollars in developing two townships near the Metagami River.

Sir William Hearst was asked whether it was not the policy of his Government to bring in Swedes and Danes rather than those of Southern Europe. He answered that it was the effort of his Government to increase the producing capacity of the province; the company was not tied down to immigrants from Northern Europe. The allegation of the Crown is that the company failed in its duty to bring in settlers which it was to do in exchange for the timber and pulpwood cutting rights over the two townships.

Work Starts on Pulp Plant

The Manitoulin Pulp Company, were recently granted a charter with head office in the village of Kagawong, Manitoulin Island, Ont., to carry on a pulp, paper, timber and other business. This is the company which is erecting a groundwood pulp mill on the island and is closely associated with the Little Rapids Pulp Company, of Little Rapids, Wis. Recent advices received from Little Current state that construction on the building will soon start and already work has begun on the docks. Considerable material has already been shipped.

The new plant will have a daily capacity of about 20 tons of groundwood and the contract for the buildings, which includes an 1800-foot waterpower canal, wood and steel flumes and docks, has been awarded to McLarty Bros., of Sault Ste. Marie.

The residents of Kagawong say that the new industry will be a great boom to that community and an indirect advantage to the port of Little Current as an immense number of logs are shipped each year to the Soo for the pulp industry which can be sold much more advantageously than to Kagawong. The poor market for pulpwood has resulted in the curtailing to a great extent of numerous operations in the district.

Strongly Supports Pulpwood Embargo

Hon. E. J. Davis, of Newmarket, Ont., in speaking at the recent meeting of the Canadian Manufacturers' Association in Hamilton, said he was a member of the Provincial Government which some twenty years ago passed the first embargo on pulpwood cut on Crown lands, a step which has since been followed by Quebec, New Brunswick and other provinces. Some years previous to that it was realized that the lumbering industry of Ontario could not be developed by the export of pine logs to the United States to be manufactured in plants across the line.

Mr. Davis was active in having an embargo enacted against the export of pine logs and immediately Ontario benefited from the establishment of many new lumber mills. He said then when he went to the Crown Lands Department he found that a similar situation existed in regard to pulpwood and saw no reason why the course which had built up the lumber industry could not do the same for the paper industry, and thus the province had enacted legislation against the export of raw material from Crown lands which had been of great benefit to the people as a whole.

Monument to Honor Mr. Anson

A monument to the memory of the late F. H. Anson, in his lifetime president of Abitibi Power and Paper Company, was unveiled recently at Iroquois Falls, Ont., at the civic center of the town built up around the pulp and paper industry there by the company. The function was a public one and was representative of the community through the attendance of a number of organizations. An address by Alexander Smith, president of the company, was among the items on the programme.

Pulp Prices are Little Easier

The pulp market is rather quiet at the present time and there has been a slight recession in prices. Groundwood is now being sold by the mill at $30 and both stocks in the hands of consumers and at mill points are low. It was expected some time ago that there would be a strengthening in quotations for bleached sulphite but this has not developed and bleached is selling to-day at $75 to $80 and unbleached at $60 to $65, with a moderate call. Paper plants are buying only as required and pulp mills are only producing as they receive orders, thus equalizing to a large extent manufacture and sale.

Notes and Jottings of the Industry

The Provincial Paper Mills, Toronto, have inaugurated an extensive direct-by-mail advertising campaign and are inviting the printing trade in various parts of the province to send in samples of work on various lines of paper stock. The campaign will be directed from the head office of the company in Toronto.

Raymond Himes, of the Manhattan Rubber Company, New York, manufacturers of rubber-cover press rolls, transacted business in Toronto recently.

Ed. Stansell, superintendent of the Mille Roches, Ont., division of the Provincial Paper Mills, spent a few days in Thorold, Ont., lately as a guest of Charles F. Buss, general superintendent of the company.

F. W. Clarke, of Quebec City, head of the Gulf Pulp and Paper Company, and President of the Canadian Pulp and Paper Association, was in Toronto last week and called upon many members of the industry.

(*Continued on page* 42)

Prospects of the Russian Pulp and Paper Industry*

N. Belski, Russian Pulp and Paper Expert

The abundance of pulpwood in northern Russia represents the basis for the future development of the paper industry in Russia. In foreign countries 50 per cent of the cost of raw materials for paper goes for pulpwood. Before the war pulpwood at the Russian mills cost from 18 to 25 rubles a cubic sagene; at Leningrad the price was 40 rubles; at Koenigsberg 52, and in some parts of Germany 60 to 70 rubles. This difference in cost of pulpwood enabled Russia before the war to export chemical wood pulp in spite of the inferiority of equipment in Russian mills, high cost of fuel, and high interest on invested capital. It is also true, however, that Russian exports of pulpwood were still larger. Germany alone received a million cubic meters, from which 12 million pud (1 pud = 16.38 kg.) of news print could be made.

Future Forest Reserves in Russia

From year to year the increase in the consumption of wood by paper mills is faster than the natural growth of the forests. Europe and, especially, America are ruthlessly cutting down their forest reserves. Canadian forests, once considered inexhaustible, have been depleted to such an extent that an embargo on pulpwood exportation is being considered. Southern Europe has always depended upon imported pulpwood. The future forest reserve of the world is in Russia.

As we shall gradually become the monopolists of the basic raw material of the paper industry, our aim should be to induce foreign capital to build pulp mills by concession in Russia in exchange for the right of exporting some of our pulpwood, or else to lend us money for government construction. Unless Russia builds up her paper industry, paper imports will grow by leaps and bounds. The latter alternative would be unfortunate, because Russia is in a position to produce paper at a most comparing favorably with prices abroad.

Not Merely Problems of Restoring Russian Mills

The problem is not merely restoring Russian mills to their pre-war productivity. Before 1900 the biggest pulp mill scarcely produced 250,000 pud of chemical pulp annually; in 1913 a paper mill making 200,000 pud was considered a large mill; in 1915 there were already three one million pud mills in Russia. Rags were the chief raw material at that time. At present rags are used only in special kinds of paper. Transportation facilities have become of great consequence, and the new mills must be located nearer to the sources of the raw materials, i.e., in the North-East.

The destructive war and post-war periods as well as technical developments in the pulp and paper industry make the reconstruction of some of the old mills economically undesirable. The mills that are worth rebuilding have a capacity of 5 mill. pud, and can be enlarged to produce 8 or 9 mill. pud. By the year 1930 Russian consumption of paper will reach at least 25 mill. pud. To supply the whole of this we would have to build new mills of 12 mill. pud total capacity. The capital required to build and run these would be 60 million pre-war rubles. The rehabilitation and expansion of the old mills would require another 15 or 20 million rubles.

Power Cost a Determining Factor

The cost of power is a determining factor in ground wood production. A survey of the Borovic waterfalls on the river Msta shows that electric power can be developed here at 1 kopek per Kw.-hour, which is one-half the cost of power from the most efficient steam plants. The Central Paper Trust plans during 1925 to begin here the construction of a 2,000,000 pud newsprint mill.

The region of Middle Kama is another place where pulp and paper mills should be built. Pulpwood supplies are practically inexhaustible here and pyrites is nearby. Moreover, excellent waterways, adequate railway connections and, finally, iron in the Ural mountains will reduce the cost of construction as well as of transportation of the future product to the populated districts on the Volga, Don and Caucasus.

It is such a policy of developing the paper industry at the sources of the basic raw material resulting in economical production that will put us on a sound basis, and not a high protective tariff.

*Torgovo-Promgshlennaia Gazeta. Translated by M. L. Caust.

PHILADELPHIA TRADE SLOWS UP

(*Continued from page* 34)

played during the week when the teams of Riegel & Co., Inc. and the Garrett-Buchanan Company met on the diamond on the Fairmount Park field at 33rd and Columbia ave., Thursday evening. In this contest Riegel & Co. won by a score of 8 to 5.

Twenty-fifth Wedding Anniversary

The twenty-fifth anniversary of wedded life of E. J. Latimer, head of the firm bearing that name, was the occasion for a celebration at his home last Monday in Haddonfield, N. J., where several hundred friends and trade associates extended to Mr. and Mrs. Latimer their hearty wishes for many years of happiness. Mrs. Latimer, before her marriage, was Miss Edna Hollingshead of Camden.

Fire in Griffith Envelope Plant

Fire on Sunday caused several thousand dollars worth of damage to the plant of the Griffith Envelope Company, 417 Locust street. The fire started in clippings from paper stocks on the fourth floor and much damage was done to the papers stored on the floor below from the seeping of water through the ceilings.

Quaker City Paper Co. Loses by Fire

Another fire of the week which caused a loss of $5,000 was that on the fourth floor of the Quaker City Paper Company, 13 N. 6th street. The fire started early in the morning before the offices were opened and the speedy services of the fire department prevented the further spread of the flames.

Reynolds Mfg. Co. Buys Cleary Pad Concern

[FROM OUR REGULAR CORRESPONDENT.]

Holyoke, Mass., June 9, 1925.—The Cleary Manufacturing Company, manufacturers, of pads and school supplies has been sold to the Reynolds Manufacturing Company possession being given in a few days. The sale was announced by James Cleary who bought the business which originally was known as the Essex Pad and Paper Company. The Essex Company was established a few years ago by P. J. Judge now head of the Highland Manufacturing Company. The sale as price is not announced.

Michigan's Paper Production Grows

Kalamazoo, Mich., June 8, 1925.—Production of pulp and paper in Michigan increased 47.4 per cent from 1921 to 1923, according to reports issued by the Department of Commerce, Bureau of Census.

According to statistics compiled for the two years there was an increase in the number of establishments engaged in that line of manufacture from 39 to 42 and in value of products from $57,420,436 to $85,241,815. In 1921 the number of wage earners averaged 9,875 and the wages paid $11,676,532. In 1923 the wage earners had advanced in numbers to 11,285 and the wages paid to $14,359,974.

MATHIESON System

The Practical Usefulness of Engineering Vision

THREE years ago the Mathieson Company, unaided and with all its resources, undertook the development of a multiple unit tank car for the larger consumer of Liquid Chlorine—an achievement in Chlorine equipment originating in the broad vision and foresight of the Company's engineers and executives.

The scope of that engineering vision included not only the advantages of the ton container to the tank car user of Liquid Chlorine (who existed at that time only in the paper industry) and to the user of standard cylinder equipment, but also the adaptability of this car to consuming problems not then even recognized by other producers.

Now, in April of this year, the Department of Water Supply of the City of New York discontinued their consumption of Liquid Chlorine in cylinders at Ashokan and began chlorination from shipments received in the Mathieson Multi-Unit Tank Car—*the first municipality to adopt this economy.*

By July first of this year, six of the leading textile mills in the progressive Southern manufacturing field will be using this type of equipment for bleaching with Liquid Chlorine.

The story of the world search for Bromine and of the Dupont Company's equipment of the seagoing ship "Ethyl" with chlorination apparatus, is not complete without mention of the fact that she went to sea supplied with Liquid Chlorine in ton containers.

An organization that is conspicuous for such broad and practical vision is of service, first to its customers, and second to the consumer at large. The development of this convenient and economical Chlorine equipment has, in itself, made many new friends for the Mathieson Company; the problems of users of other industrial chemicals, in any field and in any quantity, are assured the same intelligent study and attention.

The MATHIESON ALKALI WORKS Inc.
250 PARK AVE. NEW YORK CITY
PHILADELPHIA CHICAGO PROVIDENCE CHARLOTTE

EAGLE THISTLE PRODUCTS

Deal Direct with the Manufacturer

Caustic Soda - Liquid Chlorine - Soda Ash - Bleaching Powder
Bicarbonate of Soda - Modified Virginia Soda
Anhydrous Ammonia - Aqua Ammonia

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Richmond, Va.—The Albemarle Paper Manufacturing Company, Tredegar Building, will proceed with the erection of a new plant on the James River, for which a general contract has recently been let to Claiborne & Taylor, Addison and Monument avenues. It will be four-story and basement, reinforced- concrete, 100 x 140 feet, estimated to cost close to $100,000.

Wilmington, Del.—The Globe Fibre Specialty Company, recently organized, has acquired property at 103-5 West Third street, and will establish a plant here for the manufacture of sheets, tubing and kindred fibre products. Employment will be given to about 30 persons for initial operations, expected to be increased later. The company will operate with a capital of $150,000. W. L. Andrews is president; Otto Miller, vice-president; and Russell M. Clinton, secretary.

Chicago, Ill.—Benjamin Park, operating a local paper business, has acquired a portion of the plant of the Acme Packing Company, 813-39 West Twenty-second street, consisting of a three-story building, 50 x 97 feet, for a stated consideration of $36,000. It will be improved and equipped for storage and distributing. Early occupancy is planned.

Camden, N. J.—The MacAndrews & Forbes Company, Third and Jefferson streets, manufacturer of wallboard and kindred products, has awarded a general contract without competition to Barclay, White & Co., 1713 Sansom street, Philadelphia, Pa., for a three-story and basement addition to its plant, 56 x 100 feet, including alterations in the present structure, estimated to cost $60,000. Work will be started at an early date.

New Orleans, La.—Fire, June 1, destroyed the building at 525-27 South Peters street, occupied by the Seinsheimer Paper Company and the American Paper Company, with combined loss reported at $25,000. It is planned to rebuild.

Ironwood, Mich.—The Marathon Paper Mills Company, Ironwood, has acquired several tracts of property in Iron County costing about $125,000, and will use for expansion and other operating purposes.

Philadelphia, Pa.—The National Label Company, Ontario and Carlisle streets, manufacturer of paper products, has purchased property at Nineteenth street and Indiana avenue, 75 x 106 feet, as a site for a new plant, and purposes to have plans drawn for the structure in the near future.

Norwood, Mass.—Bird & Sons, Inc., East Walpole, Mass., manufacturer of paper roofing and kindred specialties, has awarded a general contract to the Central Engineering Company, 218 Main street, Pawtucket, R. I., for the erection of a new one-story plant building on local site, reported to cost about $45,000. It will be brick and mill type; foundations will soon be laid.

San Francisco, Cal.—The Traung Label and Lithograph Company, Battery and Green streets, is said to be planning the early rebuilding of the portion of its three-story works, destroyed by fire, May 17, with loss estimated at $40,000.

Erie, Pa.—The Hammermill Paper Company, Erie, has concluded negotiations for the purchase of a tract of about 40 acres of land on the East Lake Road, and will use the property for proposed extensions, for which plans will be developed at a later date. Ernst R. Behrend is president.

Muncie, Ind.—Fire, June 3, destroyed a portion of the stockroom and adjoining departments at the local corrugated board factory of the Ball Brothers Company, manufacturer of glass fruit jars, etc. The plant is operated for the production of material for shipping purposes. The loss is estimated at $12,000, and will be replaced.

Three Rivers, Que.—The International Paper Company has awarded contracts for the construction of new additions to its local mills, and will proceed with the work at an early date. The structures will provide for considerable increase in present output. The company has recently acquired property on the Gatineau River and is said to be projecting a large mill in this section, comprising several operating units. Tentative plans are also under advisement for hydroelectric power developments in Canada, to furnish service at the different newsprint mills. Headquarters of the company are in the Pershing Square Building, New York.

Hull, Que.—The Standard Container Company, Ltd., 193 Principale street, manufacturer of paper containers, boxes, tubes, etc., is said to have plans under way for the erection of a new one-story plant at Montclair and St. Redempteur streets. The estimated cost has not been announced. A list of equipment to be installed will soon be arranged.

New Companies

Brooklyn, N. Y.—The Magnetic Paper Box Company has been incorporated with a capital of $5,000, to manufacture paper boxes, tubes, and kindred products. The incorporators are R. Heenan, R. Bernstein and R. Tatarsky. The company is represented by Nathan Elkin, 914 Broadway, Brooklyn.

Pittsburgh, Pa.—The Pittsburgh Corrugated Paper Box Company has been incorporated with a capital of $125,000, to manufacture paper boxes and other containers. E. A. Hespenshade, 1414 Spring Garden street, is treasurer.

Rockingham, N. C.—The Economy Cone and Tube Company has been incorporated with a capital of $175,000, to manufacture paper containers and other paper products. The incorporators are Henry C. Wall and W. H. McCall, both of Rockingham.

New York, N. Y.—The Plaza Paper Box Corporation has been incorporated with a capital of $60,000, to manufacture paper boxes and containers. The incorporators are L. Armstrong, A. Jame and J. Perlstein. The company is represented by T. A. Keppler, 25 West Forty-third street, New York.

Financial

Fort Worth, Tex.—The Bunker Paper Box Company has filed notice of increase in capital from $30,000 to $50,000, for general expansion.

New York, N. Y.—The New England Envelope Company, a Massachusetts corporation, has filed notice of organization to operate in New York with a capital of $60,000.

Imagine This

Imagine the surface of every calender roll in your machine room spotlessly, permanently clean.

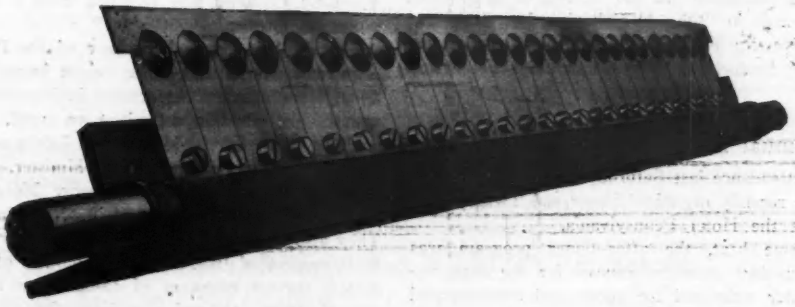
Wouldn't it make a big difference in operating conditions and results?

You don't have to resort to your imagination if you equip the rolls with *Vickery Doctors.*

The Vickery Doctor bears uniformly across the roll at all times. It scrapes the roll clean. Nothing escapes it. And the blade is self-adjusting and absolutely will not score the roll.

The Vickery Doctor is such a tremendous improvement that it is rapidly becoming standard equipment in all up-to-date mills.

Try one and you'll quickly see why.



BIRD MACHINE COMPANY

South Walpole Massachusetts

BIRD MACHINERY

7784

The VICKERY DOCTOR

New York Trade Jottings

E. A. Stone of The Stone Brothers Company, 153 Spring street, sailed for France last week on the "Paris," for an extended trip abroad.

* * *

Owing to the fact that the Salesmen's Association is staging its golf tournament at Ardsley today, the regular weekly luncheon at the Hotel Belmont was omitted this week. The usual round table will be held today in connection with the luncheon at Ardsley.

* * *

President Norman W. Wilson of the American Paper and Pulp Association, Executive Secretary Hugh P. Baker and Warren B. Bullock of the Import Committee of the Paper Industry are in Kalamazoo today attending a meeting of paper manufacturers. Business conditions and association activities are being discussed.

* * *

William A. Gately of the Simplified Practice Division of the Department of Commerce will address the Binder Board Manufacturers' Association at its meeting here on June 23. He will tell the members what the Simplified Practice Division has done in other industries and it is probable that the manufacturers will start their program along these lines.

* * *

The Department of Commerce is syndicating press matter which acquaints the public with the work of the Woods Utilization Committee of which President Norman W. Wilson and Executive Secretary Hugh P. Baker of the American Paper and Pulp Association are members. A picture of Dr. Baker accompanies the first article which has already appeared in numerous newspapers.

* * *

Donald E. Cable, assistant director of the Research Department of the Oxford Paper Company, 87 35th street, Brooklyn, and a member of the Technical Association of the Pulp and Paper Industry received the degree of Doctor of Philosophy in the Faculty of Pure Science, Columbia University, at the Commencement last week. Dr. Cable spent his first years of college work at the University of Chicago and was graduated with the degree of B.S. in the course of chemical engineering from Armour Institute of Technology in 1918. He received the degree of M.S. from the University of Wisconsin in 1920. At Columbia, Dr. Cable was the recipient of a University Fellowship in chemical engineering during 1922-23 and the Samuel Anthony Goldschmidt Fellowship for the year 1923-24.

Hold Annual Dinner and Dance

Nearly 300 were in attendance last Saturday night at the annual dinner and dance of the recently organized Paper and Twine Board of Trade, Inc., held at the Hotel Pennsylvania.

Owing to the extreme heat, the after-dinner program was made very brief. Alexander Aaronson, counsel for the organization, acting as toastmaster welcomed the guests and congratulated the members on the success of their first social gathering. He then called upon Michael H. Sincoff, president of the association to arise, and surprised him by presenting to him a beautiful gold watch, the gift of the association. Mr. Aaronson told him that it was a token of appreciation not only of the esteem in which he was held by every member of the association, but also of his interest in the formation of the organization and his labors in connection with the initial development of the Board of Trade.

Mr. Sincoff responded, expressing his gratitude in well chosen words and then expanding upon the opportunity the Board of Trade had for promoting better trade conditions for its members and everyone engaged in that line of business.

Short addresses were also made by Ex-Judge Pollock of Brooklyn and Barnard G. Kaufman. There were among those present representatives of the paper, twine and tissue mills of this vicinity. Souvenirs were presented to the ladies and also to the men. An attractive souvenir program of the function was also published for the occasion, containing pictures of all the officers.

The Board of Trade will not neglect its social activities for those of a more routine business character. Already it has been decided upon to hold an informal get-together function in the fall.

The committees in charge of Saturday night's affair were as follows:

Journal Committee—Joseph N. Lazarus, chairman; Max M. Cohen, Harry Z. Hyman, Eugene A. Steinfeld, Sylvan S. Levy, Sylvester P. Nawrath, Benjamin Rice and Bernard Shapiro.

Arrangement Committee—Jacob Press, chairman; Charles Greifer, Harry Wacker, Murray Scherr, George Weinstock and Samuel Leiman.

Reception Committee—Jacob Sincoff, chairman; Henry Spitz, Lew Coon, Abraham Freundlich, Victor W. Simon and Moe Hyman.

The Board of Trade was organized about three months ago and not only started life with enthusiasm but is thus early giving promise of a life of usefulness to its members. The officers who were elected to preside over its destinies in the initial year of its career are as follows:

President, Michael H. Sincoff; vice president, Jacob Glekel; secretary, Sylvester P. Nawrath; treasurer, Max M. Cohen; counsel, Alexander Aaronson.

Board of Directors: Michael H. Sincoff, chairman; Jacob Glekel, Max M. Cohen, Harry Z. Hyman, and Sylvan S. Levy.

PULPWOOD BUSINESS DULL

(*Continued from page 37*)

Harry Balm, general manager of Kilgour Bros., paper box manufacturers, Toronto, spent the past few days in the Muskoka district.

W. J. Findlay, of the Strathcona Paper Company, Strathcona, Ont., was in Toronto recently calling upon the trade. He reports business in the sheathing paper and board line as being very good.

F. M. H. Cushing, of the Montrose Division of the Provincial Paper Mills, Thorold, Ont., spent a few days in Toronto recently.

Charles V. Syrett, manager of the Victoria Paper and Twine Company, Toronto, has returned from a business trip to various points in Quebec.

Jean Rolland, general manager of the Rolland Paper Company, Montreal, who attended the recent annual meeting of the Canadian Manufacturers' Association in Hamilton, was appointed chairman of the standing committee on tariff.

Hon. James Lyons, Minister of Lands and Forests for Ontario, and Walter C. Cain, Deputy Minister, were in Quebec City lately conferring with Hon. Honore Mercier, Minister of Lands and Forests for Quebec, and F. X. Lemieux, Deputy Minister. They also met Premier Taschereau and spent some time with him. It is understood that one of the objects of the conference was to discuss certain measures of co-operation in regard to protection against forest fires and also legislation affecting the forests.

Powell River Company, Limited, Powell River, B. C., paper manufacturers, will start work on a new paper machine room to cost about $400,000. The new unit will be two stories, 120x360 feet, of concrete construction. A new screen room will also be erected, 80x91 feet, of concrete construction, at a cost of $60,000.

Leaves Cornell Wood Products Co.

CORNELL, Wis., June 1, 1925.—T. A. Burbank, who for nine years has been general superintendent of the plant of the Cornell Wood Products Company here has retired. Before coming to the Cornell company he was connected with the Androscoggin Pulp and Paper Company which he served for an equal period.

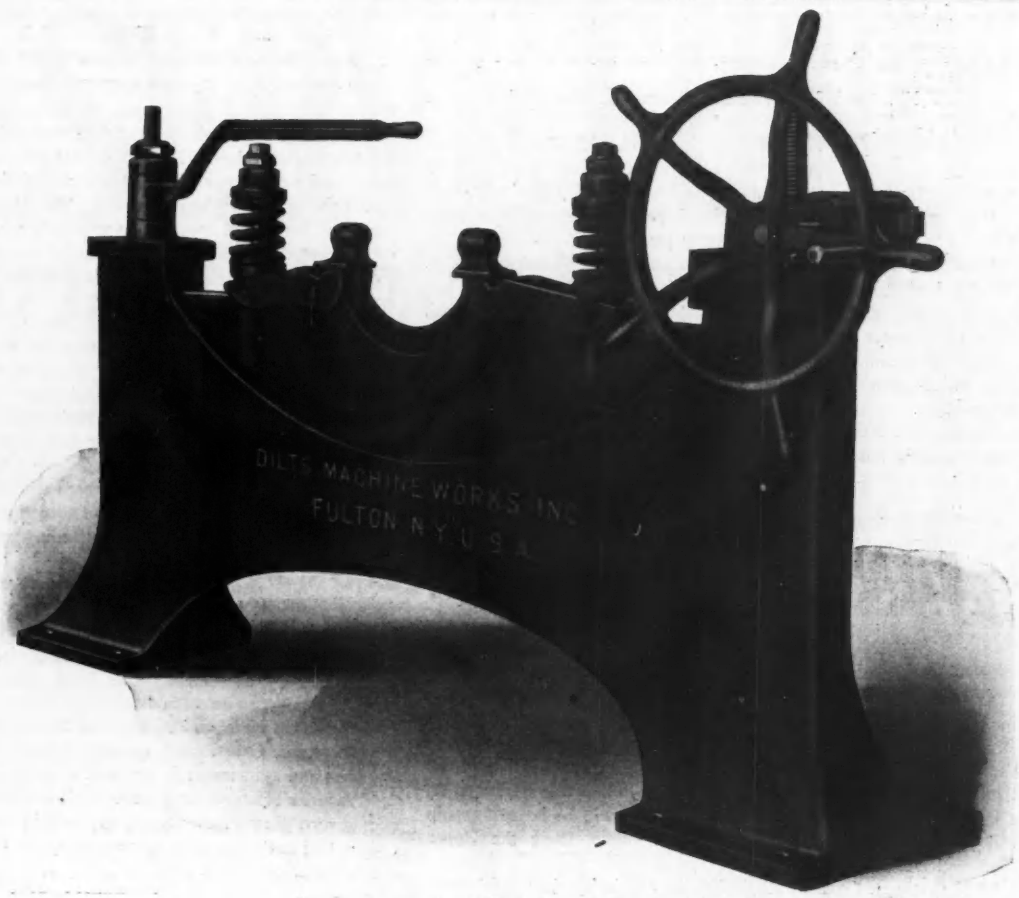
THE SUPERIORITY OF THE ONE-PIECE RIGID STAND—

The Dilts one-piece Rigid Stand is not attached to the tub, and the tub castings are not racked and strained by the operation of the roll.

These Rigid Stands, made in one piece, are obviously superior to a built-up stand or a pair of posts supporting the lighter bar.

These one-piece Rigid Stands are made with large floor bearings and their support of the roll is very staunch and firm, and eliminates lost motion where the roll passes over the bed plate.

The Dilts one-piece Rigid Stands contribute toward a more efficient beating engine.



Patents: May 8, 1906, and May 27, 1919

The Dilts approved NEW TYPE Beating Engines are equipped with these superior one-piece Rigid Stands fitted with Spring Cushioned lighter bars, adjustable water-cooled bearing boxes and a dust proof oil bath in which the worm and gear operate.

You certainly should have the Dilts approved NEW TYPE Beating Engines in your mill. "Your paper is made in your beaters."

Dilts

MACHINE WORKS, Inc. FULTON, N. Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

Trade Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

NADSCO No. 200,519. National Department Stores, Inc., New York City. For wall paper and toilet paper.

ARLAC-DURODERMA No. 205,313. Carl Friedrich Brauer, Stettin, Germany. For wax paper, corrosion varnish, wax stencils, cardboard, hectograph sheets, and papers made from Japan silk.

VACUUM No. 212,186. International Paper Company, New York City. For writing paper and printing paper.

EMBLEM No. 212,561. Lee Paper Company, Vicksburg, Miss. For bond anl ledger papers.

TRUSTY No. 213, 110. The Anchor Paper Company, Cincinnati, Ohio. For paper bags.

PULL-ONE No. 205,692. Fort Howard Paper Company, Green Bay, Wis. For toilet paper, paper towels, paper napkins, and crepe paper.

ZIGZAG No. 205,920. Graham Paper Company, St. Louis, Mo. For wrapping paper.

ATCO PENCRAFT No. 208,371. American Tablet Company, Green Bay, Wis. For tablets school papers, and writing papers.

RAPID BOND No. 209,650. Graham P. Paper Company, St. Louis, Mo. For printing and writing paper commonly employed for mimeographing, printing and writing purposes.

MARQUETTE No. 210,840. Gilbert Paper Company, Menasha, Wis. For bond paper.

Funds for Conklingville Reservoir

ALBANY, N. Y., June 8, 1925.—The first bond issue of $3,000,000 to provide funds for the Conklingville Reservoir construction is expected to be floated here shortly. With the apportionment of the estimated $9,000,000 cost of project definitely decided upon all that remains is a few details before construction work is started on a large scale. The major portion of the cost will be borne by pulp and paper concerns with water power holdings along the Upper Hudson River and its tributaries.

Of the estimated cost of $9,000,000 the regulating dam and appurtenances will cost but $2,200,000. The magnitude of the work is shown by the engineer's estimates. Property damage including lands, telephone, telegraph and transmission lines is placed at $2,350,000; clearing of reservoir basin $710,000; re-location of F. J. & G. Railroad tracks $400,000; new state highways 6.4 miles at $50,000 a mile, $320,000; new town highways, 35 miles at $18,000 a mile, $630,000; removing cemeteries $100,000; new bridges $360,000; ferry at Northampton $50,000; engineering, general overhead and contingencies of construction 15 per cent., $1,068,000; interest on certificates of indebtedness $30,000; preliminary expenses $182,000; interest during construction $350,000; contingent fund $150,000.

In explanation of the fact that pulp and paper concerns of the Upper Hudson region will bear most of the cost of the project it is stated that these firms and corporations will be the greatest benefited. It is pointed out that the Conklingville Reservoir when in operation will increase the value of power sites in the region by millions of dollars. With the project giving assurance of a regulated flow in the river throughout the year pulp and paper corporations are already planning to take advantage of the greater power possibilities of the Hudson. The Union Bag and Paper Corporation plans to spend approximately $4,000,000 for developing greater power at Bakers Falls where the company already is securing 20,000 horse power from two dams. Another dam is to be constructed which will give the Bakers Falls plant a capacity of approximately 60,000 horse power. The International Paper Company and other firms are understood also to be considering steps for utilizing the greater flow. The Conklingville Reservoir it is said will save the paper industry an enormous sum each year by eliminating shut downs caused by low water in the river at certain seasons.

Clear Definition of Law for Associations

WASHINGTON, D. C., June 8, 1925.—Trade Associations now have a clear definition of the law and can govern themselves accordingly, said Attorney General Sargent in commenting upon the Supreme Court's decisions in the Maple Flooring and the Cement Association cases, affirming the right of trade associations to render current statistical service to their members. The Department of Justice, on the other hand, will continue to prosecute associations where it discovers that they are using the statistical service as a means of controlling production and prices by agreement, the Attorney General stated.

The Attorney General's statement reads:

"These decisions make it plain that the mere collection and dissemination by a trade association of statistics relating to prices on past transactions, production, stocks in hand and sales is not in and of itself illegal. Both the Cement and Maple Flooring Associations maintained an elaborate system for gathering and distributing such statistics. The court plainly decided these cases against the Government upon the ground that the records did not disclose any or sufficient evidence of an agreement between the members to make use of the statistics in fixing prices, curtailing production or otherwise restraining trade.

"The court did not over-rule but expressly distinguished the former decisions in the hardwood lumber and linseed oil cases, so that the Sherman law remains effective as to associations which may use statistical service as a mere means of facilitating the fixing of prices, etc., by agreement. The Department of Justice will continue to be alert to detect and prosecute associations whose operations go beyond the mere dissemination of knowledge, now sanctioned by the Supreme Court, and actually result in combinations, conspiracies and agreements in restraint of trade in violation of the law.

"Trade associations now have a clear definition of the law and can govern themselves accordingly within the limits of these decisions and not operate in agreement to the detriment of the public and in violation of the law."

C. S. Hemingway Retires from Byron Weston Co.

HOLYOKE, Mass., June 9, 1925.—Charles S. Hemingway, who retired the past week as salesman for the Byron Weston Company of Dalton has so many bonds of connection with Holyoke that he always seems to those of the city as a Holyoker. For twelve years he was principal of the Holyoke High School and in 1886 became associated as assistant treasurer and salesman for the Carew Manufacturing Company in South Hadley Falls still retaining his residence in Holyoke. After the death of E. C. Southworth, treasurer and manager of this company in 1898 Mr. Hemingway accepted the position of assistant treasurer of the Southworth Company in order to familiarize himself with the new lines of deckle edge papers and to promote their introduction throughout the United States.

After four years with this mill he gained interest and support among Holyoke paper manufacturers for the erection of a paper mill at Millers Falls to be known as the Millers Falls Paper Company. The work of erecting and planning this mill undermined his health and he was obliged to give up work for some time.

After his health had been restored he accepted a position in 1906 with the Byron Weston Company of Dalton where he remained until his recent retirement.

USE YOUR RESERVE FUND *to* REPLACE *obsolete* MACHINERY

ONE of the outstanding benefits of the income tax system as applied to paper mills is the education it has given regarding the matter of establishing reserve funds for depreciation and the replacing of obsolete equipment. The proper utilization of this fund has accomplished exceptional results in many fields and paper makers are becoming more and more imbued with the idea that immense benefits can accrue to them in replenishing their old equipment with modern machinery.

The economy of junking obsolete machinery is evident. Millions of tons of coal, valued at over thirty million dollars, were saved the railroads last year principally because of the retirement of old locomotives and the substitution of more efficient and modern types. What holds true with the railroads and other industries holds true also with the paper-making industry. Many mills tenaciously cling to old equipment and do themselves a decided injustice by failing to utilize the low-cost modern machines for the excessive upkeep of the old, whose production per hour is far below modern standards.

Your reserve fund for obsolesence and depreciation can be utilized to good advantage now by having installed the modern "New Beloit Fourdrinier," a machine that has revolutionized production records and low-cost performance.

	1924	1923
Balance forward..	$1,060,302.09	$1,011,650.57
Less Fed. taxes...	44,436.88	61,356.46
	$1,015,865.21	$950,294.11
Profits	574,657.29	594,257.96
	$1,590,522.50	$1,544,552.07
Appropriations—		
Depreciation	$208,584.98	$200,065.53
Patents	24,996.23	24,511.20
Pref. dividends...	24,930.50	29,975.75
Common dividend..	236,905.00	229,697.50
	$495,416.71	$484,249.98
Bal. carried for..	1,095,105.79	1,060,302.09

Get the facts. Send for Bulletin No. 9 now.

The NEW BELOIT FOURDRINIER

Beloit Iron Works — **Beloit, Wis., U.S.A.**

Established — Since 1858

Boston Paper Men Have Outing

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., June 10, 1925.—The Annual June Meeting of the Boston Paper Trade Association was held Tuesday, June 9 at the beautiful Vesper Country Club at Lowell, Mass. There were nearly 250 members and guests in attendance.

The feature of the day's program was the golf tournament. Play started promptly at 9 o'clock when the first foursome teed off. The tournament was over soon after one. The first net was won by J. L. Monroe of Monroe Church Co. He was awarded the Association Cup which he retains until next year. He was also awarded a cup as a permanent trophy.

Second net was won by F. P. Blackman of D. F. Monroe Company. He was also awarded a cup.

Norman Harrower carried off the cup for first gross, while Ed. Bement captured the second prize, a cup. The prize for the best selected 9 under 20 was won by Perry Von Olker.

The baseball game between the manufacturers and the merchants resulted in a tie score, 4 to 4, although the merchants tried to claim the game by a score of 9 to 1, the claim was disallowed, and the prize, a box of cigars was "divided" up between players of both teams.

Bowling on the green proved a popular event with about 24 entries. R. R. Teele carried off the first prize.

The horseshoe tournament developed into a family affair when H. J. Casey and L. M. Bigley of Casey-Bigley Company won the event and were presented with Moore Pencils.

C. B. Wilkins and E. A. Carter won the tennis doubles tournament and were presented with cups.

During the day, music was furnished by Aiken's 381st Field Artillery Band of Lowell.

A delightful lobster and chicken dinner was served at 2 o'clock and following a short business meeting golf was in order for the balance of the afternoon.

To Be Sales Manager of Combustion Engineering

Combustion Engineering Corporation, Limited, announce the appointment of T. S. Morrisey to be sales manager of its Eastern district, with offices in the Canada Cement Building, Montreal.

Mr. Morrisey graduated from the Royal Military College in 1910, and from that date until the outbreak of war was engaged on the design and construction of various engineering projects.

In August 1914 he joined up in the 13th Battalion, The Royal Highlanders of Canada, and proceeded overseas with that unit. He served continuously for three years in France and later in Siberia, and was demobilized in 1919 with the rank of Lieut.-Colonel. During the war he was awarded the D.S.O., the Japanese Order of the Rising Sun, and the Czecho-Slovak War Cross; and was several times mentioned in despatches.

More recently Mr. Morrisey was employed as construction and operating engineer on some of the largest installations for the American Company of the Combustion Engineering Corporation, and has served for some time in the head office in New York, so that he is well qualified to advise, from practical experience, in matters pertaining to combustion.

None of Bids for Reading Mills Accepted

The notice of the public sale of the Reading Mill which appeared in various trade and other papers seems to have left the wrong impression on its readers.

The property which was put up for public sale on June 4 at Reading was known as the Reading Mill. This was the original mill of the Reading Paper Mills and in that mill it manufactured rag book paper since 1866. None of the bids offered in the public sale on Thursday, June 4, was accepted.

The Reading Paper Mills are just completing a consolidation of their two book mills. The machine in the Reading Mill, after a complete overhauling and remodelling, has been erected in a new machine room at the Packerack Mill. The finishing room has been modernized and a new building completely equipped for the storage and handling of rags has been erected. They have also built a new office building adjoining the Mill. The consolidation will be completed about June 15.

Now the Colorado Pulp & Paper Co.

DENVER, Colo., June 9, 1925.—Judge James C. Starweather having approved the sale of the defunct Myers Pulp and Paper Company for $370,000, to Charles B. Myers and Joseph Buchhalter, the name has been changed to Colorado Pulp and Paper Company and is now running twenty-four hours a day, its capacity being 1,250 tons a month.

It seems to have been the original intention to be content with making board, but now it is planned to add a box making plant, there being room within the large steel and concrete structure. This addition should assure a large sale of the output, it is understood. The plant is located in the East end of the city of Denver and has a spur track leading to the railroad and is within two blocks of the main highway. In a few words it has everything to make a paying business. It makes twenty different kinds of paper products and the new owners are Denver and Colorado men.

Awards for Government Paper

WASHINGTON, D. C., June 10, 1925.—The R. P. Andrews Paper Company has been awarded the contract by the Government printing Office for furnishing 33,840 pounds (180 reams) of lithograph finish first class chart paper at 27.5 cents per pound bids for which were received on May 18.

The Davey Company will furnish 36,000 pounds of best quality binders board at $130 per ton bids for which were received on May 13. The Bryant Paper Company will furnish 9,600 pounds of 38 x 48—192 white mf rag book paper at 10.95 cents per pound.

Beaver Board Co. to Make News Print

THOROLD, Ont., June 8, 1925.—An important addition to the industrial life of Thorold will take place as soon as plans have been arranged for a portion of the handsome Beaverboard plant to be used as a news print mill, according to authoritative announcement made last week.

This does not mean a reduction in the making of the company's well known brand of Beaverboard, but the concern is now making arrangements and have sufficient electric power to put in an up-to-date paper making machine and will produce news print paper.

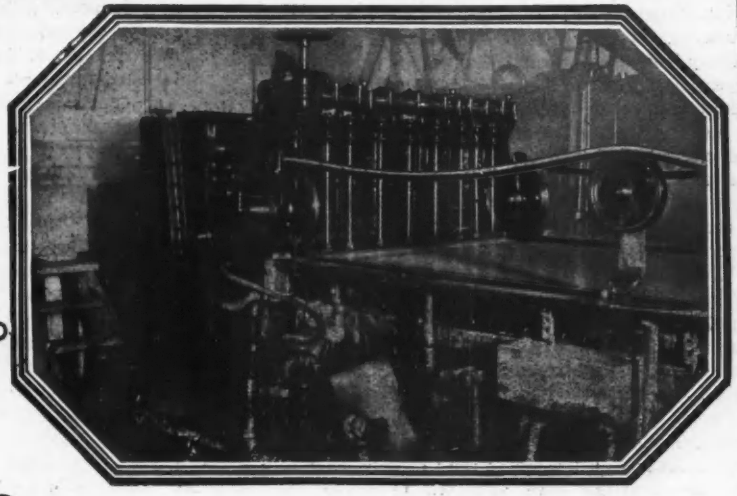
Bloomer Bros. to Install Dilts Beaters

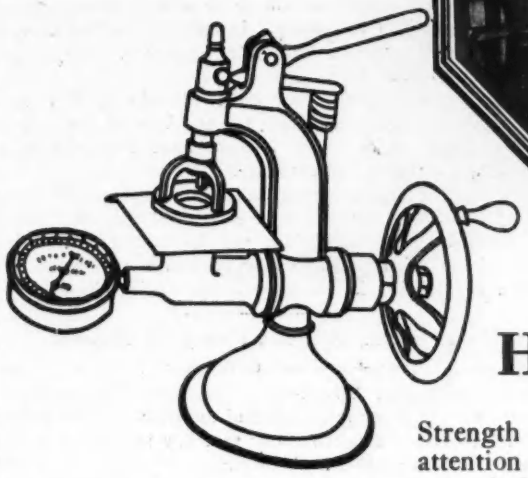
NEWARK, N. Y., June 8, 1925.—The construction work at Bloomer Brothers' Mill is progressing rapidly. The new machine is more than half erected and the building work is well along. The new beater room floor together with the basement and chests is finished and the steel workers are commencing their work today. The beater room is expected to be ready in July for the installation of four Dilts new type beaters and they will probably start making paper late in August.

"Big Jobs Book"

The Dodge Manufacturing Corporation, Mishawaka, Ind., has just released an elaborate book visualizing the engineering, foundry and machine shop facilities of that company available for the manufacture of special machinery and equipment. The book also shows a wide range of special equipment built by the company.

A copy of this book will be sent to executives of engineering and sales companies, as well as manufacturers who prefer not to build their own special machinery, but to use their plant equipment for the manufacture of their standard products.





Inlet Made Papers Have Greater Strength

Strength of paper is a characteristic to which much attention has been directed and is generally accepted as one of the best criteria of quality. Strong, well formed paper is being consistently produced by the Voith High Pressure Stock Inlet.

"Wild formation" is prevented with the Inlet because a smooth, steady, continuous stream of stock free from lumps and foam spots is evenly distributed over the surface of the wire at the breast roll. Formation occurs immediately thereby preventing parallelism of the fibres and insuring thorough overlapping of them.

Mills operating the Inlet on all classes of paper stock report that their papers show increased strength. In every case the pop test is higher and more uniform across the entire sheet. Paper having greater strength is but one of the many advantages gained through the use of the Inlet. Have us show you more about this latest development in paper making.

This instrument is demonstrating to users every day the value of the stock inlet. Actual figures tell them that the inlet is making stronger paper.

Write for your copy of the Voith Stock Inlet Booklet today. It tells of the many points of advantage possessed by the new inlet and describes it fully.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

Tells of Import Committee's Work

KALAMAZOO, Mich., June 11, 1925.—"Since its organization October 1, 1924, the Import Committee of the American Paper Industry has investigated 123 different types of suspected improper importations of foreign paper, as being either misclassified, undervalued, or dumped from foreign countries," said Warren B. Bullock, Manager of the Committee, before a conference of Michigan paper manufacturers here today. "Of these cases, many involve a large number of importations; for instance, four of these cases involve some 150 separate importations, with a total of about 5,000 tons of paper held up for determination of the proper duties to be levied.

"When the Import Committee came into existence, it was realized that there was widespread improper practice in the importation of paper. It has been a suprise, however, even to those most intimately connected with this work, to learn of the extent of the unfair practices which the committee was formed to combat.

"Matters taken up involve every group in the industry. For instance, misclassification of imports with intent to secure free entry or lower than the proper rates of duty, have been disclosed when the importers have attempted to secure free entry as 'standard news print paper' of poster, catalogue, book papers, and similar papers; entry of writing as offset printing; entry of manifold bond and bible papers as printing paper; entry of greaseproof papers as wrapping paper, and a large number of special similar problems involving various grades, from the finest writing to the coarsest wrappings.

"As significant development has been the growing tendency of importers to submit to customs authorities, in advance of purchases abroad, samples of the paper designed to be imported, so that they may be sure that they are properly entering the papers. This shows that the importers, as a result of the Committee's work, are exercising more and more care to avoid coming in conflict with the tariff act since their recent experiences with the effectiveness of our work."

Montreal Trust Co. to Handle I. P. Stock

International Paper Company has appointed the Montreal Trust Company as Montreal Transfer Agent, and Royal Trust Company as Montreal Register, of its 7 per cent preferred stock and its common stock.

International Paper Company has always had a substantial number of stockholders resident in Canada, and in connection with its purchase of the Riordon properties a considerable addition will be made to its list of Canadian stockholders. Under the terms of the sale of the Riordon assets, approximately $4,000,000 of new 7 per cent Preferred Stock of International Paper Company was issued to holders of the 6 per cent General Mortgage Bonds of Riordon Pulp and Paper Company. As a very large amount of these bonds is held in Canada, the number of Canadian stockholders of the company will naturally show an increase.

The appointment of a Montreal Transfer Agent and Registrar will not only be a convenience to Canadian stockholders of the company, but is also evidence of the company's desire to facilitate further acquisition of its stock by Canadians.

The International Paper Company's interests in Canada make it only fitting that its stock should be widely held in Canada. Its subsidiary, the Canadian International Paper Company, consumes more pulpwood in Canada than any other company, and is in fact one of Canada's largest industrial companies.

Mead Pulp and Paper Co. Opens New Office Building

CHILLICOTHE, Ohio, June 8, 1925.—Officials of the Mead Pulp and Paper Company, leading Chillicothe industry, welcomed the public at a house warming Wednesday afternoon of last week inaugurating the opening of their now office building, just completed. The doors were thrown wide between one and six o'clock in the afternoon, with a special program of music, old-time fiddlers, singers and comedy stunts from 2:00 until 5:30 o'clock.

Officials of the company stressed the utility feature of the building's construction. Designed primarily for usefulness, they pointed out that the building is, first, last and all the time, a part of their factory group and, as such will house activities, two thirds of which are a part of factory operations.

Contrary to usual custom in which office buildings for large corporations figure the new structure is not, they declare a show place. While modern in every respect it has been laid out for efficiency in much the same manner used throughout the rest of the plant.

The chemical laboratories will take up the entire basement of the building. The first floor will be devoted to factory adjuncts, with the exception of two offices. Included in the first floor will be the hospital magazine headquarters, payroll, safety department, and foremen's offices.

Almost half of the second floor will be occupied by Mill council, Athletic association and committee rooms. Two of the latter are provided. They can be thrown into one large auditorium accommodating quite a crowd if necessary.

While no official announcement has been made regarding the fate of the present office quarters it is understood that steps will be taken to raze the building which now houses the offices. It is understood this building will be replaced with a modern two story structure which it is said will house a new coating plant.

Move Island Mill Machinery to Monroe

[FROM OUR REGULAR CORRESPONDENT.]

MONROE, Mich, June 8, 1925.—The Consolidated Paper Company is moving the machinery in the plant of the Island Mill at Ballston Spa, N. Y., which it bought recently to a new mill which is being constructed for the purpose at this place.

The new modern factory building which is now being erected for this purpose will contain one 86-inch board machine, sixty-one driers, eight beaters and twelve digesters.

The new mill will make straw board and will be ready to begin operation about September 1.

To Take Action Soon on China Clay

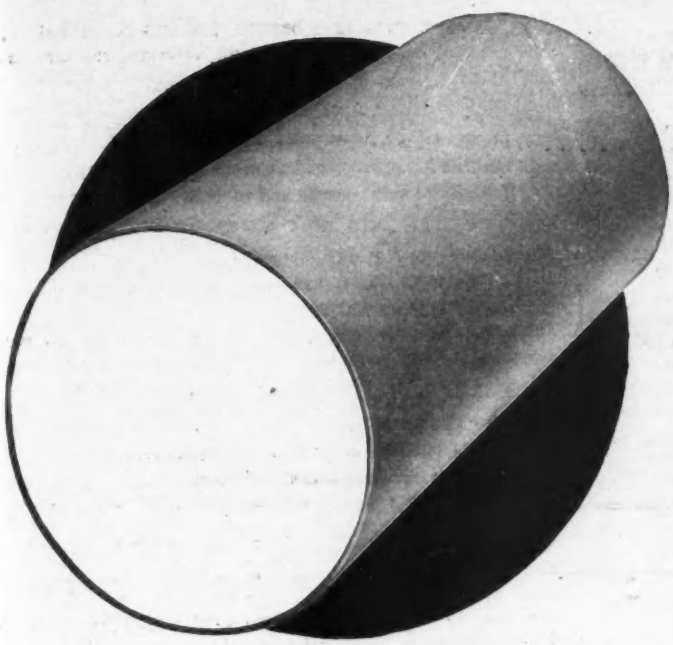
WASHINGTON, D. C., June 8, 1925.—It is expected that the Advisory Board of the Tariff Commission will take action within the next couple of weeks on the preliminary report made by experts of the Commission regarding China clay. If the Board and the Commission itself decide that a further investigation shall be made into the subject it is probable that foreign field work will be taken up shortly after the middle of June because experts of the Commission are going abroad about that time to look into the pottery industry.

Keith Paper Co. Gets Out Sample Book

TURNERS FALLS, Mass., June 8, 1925.—The Keith Paper Company has just produced a very attractive folio containing samples of its various lines of papers. The samples are of letterhead size and show speciments of steel engraving, die stamping and plain printing. The samples are comprehensively arranged and the printing work affords excellent suggestions as to the make up for attractive letterheads and should prove valuable to paper salesmen.

Strathmore Town Convention June 15-16

WORONOCO, Mass., June 8, 1925.—The next Strathmore Town Convention of the Mill and Merchants Association and Strathmore executives group will be held Monday and Tuesday, June 15 and 16, at Woronoco, Mass. This will be the only meeting of the association to be held this year.



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The Imprint of Quality

Note the pure, snowy whiteness of the interior. Compare with any other paper can.

Here at last—

A round container with a pure white lining

The New Menasha Can—
The Only White-Lined Can Made

Another Menasha Quality Product.

Compare the inside of the white-lined MENASHA CAN with the inside of any other can.

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Please send me samples and prices on MENASHA PAPER CANS in the size and quantities checked.

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- ☐ .....—quantity.....

Name.....

Address.....

City..... *State*.....

PAPER TRADE JOURNAL
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The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

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FOREIGN PAPER TRADE

The foreign paper trade of the United States during April showed a substantial gain as compared with the same months last year both in imports and exports, although with the exception of exports of paper and paper products there was a decline in comparison with the preceding months, according to the Paper Division of the Department of Commerce.

Exports of paper and board during April were valued at $2,105,921, an increase of $25,024 compared with the same month in 1924 and of $59,000 compared with the month of March. The volume of shipments of nearly all items showed notable increases, exports of news print and book paper having increased approximately 20 per cent each in comparison with the same month in 1924, while exports of miscellaneous wrapping papers show an increase of 16 per cent, of sheathing and building paper 250 per cent, and of wall paper 50 per cent. Relatively the largest gains, however, occurred in shipments of finer grades of paper and paper specialties. Imports of surface-coated paper increased 96 per cent compared with the same month in 1924; tissue and crepe paper 39 per cent; carbon paper 33 per cent; envelopes 26 per cent; cash register and adding machine paper 62 per cent; paper towels and napkins 43 per cent; and greaseproof and waterproof papers 90 per cent. With the exeception of boxboard, however, exports of board show a downward tendency, bristols and bristol boards having decreased approximately 10,000 pounds compared with the preceding month, and miscellaneous paper board and strawboard 309,000 pounds. Other decreases are observable in exports of photographic paper which fell off 10 per cent, and exports of paper bags which decreased 19 per cent.

Exports of paper base stocks from the United States were valued at $490,382 during April, a decrease of $77,597 under the March shimpments, but an increase of $181,800 over those of April, 1924.

Imports of paper and paper products during April reached a total value of $9,974,204, an increase of $18,126 over the same imports in April, 1924, but a decrease of $613,143, or 6 per cent, compared with the preceding month. Imports of news print, which amounted to 247,345,832 pounds and which represented 88 per cent of the value of the total receipts, registered an increase of 10 per cent in volume and 2 per cent in value compared with receipts during April of last year. Increases were also reported in imports of greaseproof and waterproof papers; writing, bond, and similar papers; miscellaneous paper boards; and paper boxes. Imports of pulp boards and of cigarette papers, which outside of news print paper, rank among the leading imports decreased approximately 10 per cent each.

Imports of paper base stocks also declined in comparison with those of the preceding month, although the total, 124,947 tons valued at $7,328,606, represents an increase of 26 per cent in quantity and 30 per cent in value compared with the same month in 1924. Losses occurred chiefly in receipts of rags and waste for paper stock, which not only are considerably under the March, 1925, imports but also under those of April, 1924.

Imports of pulpwood during April amounted to 78,193 cords, valued at $754,883, were 48 per cent under those of March, 1925, and 15½ per cent under those of April, 1924.

TO ESTABLISH INDUSTRIAL RESEARCH

In a neat pamphlet distributed by Joseph Deutch, chairman of the Endowment National Campaign Committee, 1 Madison avenue, New York City, entitled *Research Pilots Industry*, there is presented the dual program of the Lithographic Technical Foundation to correlate research and cooperative education which marks "the first effort of an industry as a whole to initiate such a plan."

The Foundation Research Laboratory began operation at the University of Cincinnati, March 1, 1925, with Prof. Robert Finlay Reed in charge. On the board of directors of the Foundation are David L. Luke, President, West Virginia Pulp and Paper Company, and Sydney L. Willson, President, American Writing Paper Company.

The research activities will be directed to basic problems of general concern in the lithographic industry and the results will be published as justified. For the maintenance of the Research and Cooperative Educational Plans an endowment fund of $600,000 is now being raised, of which nearly $500,000 has already been subscribed. As an example of the subscriptions one manufacturer of supplies for lithographers subscribed $10,000.

For the training of lithographic craftsmen use is made of the cooperative scheme devised by Dr. Herman Schneider of the University of Cincinnati twenty-five years ago, whereby half of the students are in school while the other half are in industry—they alternate on their jobs and school work every four weeks. Devices have been evolved which make this change from school to plant and from plant to school operate without any confusion or loss to either the plant or the University.

The students acquire a sequential training in practice and a sequential training in theory, and the two are hitched together and coordinated.

The same plan with differences in details of operation, is used in high schools to train the more highly skilled workmen. Like plans are in operation in Fitchburg, Mass., Dayton, Ohio, and York, Pa. In the State of Washington efforts are being made at Millwood, Wash., near Spokane, where the plant of Inland Empire Paper Company is located, to secure cooperation whereby the same

plan may be instituted in connection with the new Spokane Valley High School.

In connection with the Foundation's research work the major investigations will be in papers and inks and in certain accessories of the presses. In regard to papers the first studies will be particularly as they are affected by humidity.

In view of the importance with which the conditions of atmospheric relative humidity and the moisture content of the paper at the time of testing, are regarded by paper chemists, this will be extremely interesting to them.

This plan of an important paper-using industry for research and education and the substantial fund it is raising to finance it should encourage those in the paper industry who have done such valiant work during the past six years not only in the preparation of the five volumes on the *Manufacture of Pulp and Paper,* but also collecting the money to finance the undertaking.

While it appears very difficult if not impossible to interest the paper industry in cooperative research in their own general problems, it is encouraging to believe that progress is being made along the line of educational training.

Carthage Sulphite Pulp & Paper Co. Sold

WATERTOWN, N. Y., June 8, 1925.—The mill of the Carthage Sulphite Pulp and Paper Company at Carthage and its allied property was sold at public auction May 23 for $400,000 to the purchasing committee of the bondholders' protective committee.

The sale was conducted from the court house steps by Attorney Charles A. Norris of Carthage, receiver for the bankrupt concern. Bidding was slow and only a few paper mill concerns were represented.

J. C. Marsh of Philadelphia, Pa., and David W. Balmat of Carthage, members of the purchasing committee that bought the plant, were the only bidders for the property in its entirety. The purchasers deposited 25 per cent of the purchasing price in bonds as required under conditions of the sale.

Mr. Marsh said that plans were under way for the property but that he couldn't announce them at the present time. He said that something would be done inside of 90 days. In speaking further upon the matter he said that perhaps the company would be reorganized as the mill had modern equipment for the manufacture of paper.

Mr. Marsh also said that another plan called for the dismantling of the mill and moving the machinery to a larger city, possibly Philadelphia or New York. He stated that at the present time a prominent box manufacturer would like just such a plant if it could be moved near New York city. The plant will not remain idle for any length of time, said Mr. Marsh, as he explained that the bondholders protective committee expected to make it an asset.

Mr. Marsh is treasurer of the financial concern of Stroud & Co. of Philadelphia and Buffalo. He said that the public of Northern New York would be correctly informed as to the plans of the committee through Mr. Balmont of Carthage. Announcement will be made just as soon as possible as to what will happen to the plant, he said.

The sale of the plant was ordered by Judge Cooper on March 3, in order to satisfy a mortgage of $650,000 after the case had been pending in federal court for several months, the chief question being as to whether the company should be continued to operate under the management of the receiver. In all legal matters, Attorney Francis E. Cullen has represented the receiver.

The property and assets of the company were taken over on January 14, 1924, and the mill has been practically idle since that time, throwing a number of persons out of work.

It is rumored that business men of Carthage are already endeavoring to have the mill retained in the village.

Addresses Advertising Women

[FROM OUR REGULAR CORRESPONDENT.]

BUFFALO, N. Y., June 6, 1925.—"It has been said that the god of sales is advertising and that the newspaper is his profit," stated R. S. Kellogg, Secretary of the News Print Service Bureau, at a luncheon today of the Buffalo League of Advertising Women. "With more than 33,000,000 copies of daily newspapers printed in the United States, there is no lack of facilities for the display of goods," continued the speaker, "to say nothing of the 22,000,000 capies of Sunday issues and the large size and circulations of the many well-known periodicals. There is a copy of a daily newspaper published for every two inhabitants in the State of New York.

"Advertising quickly makes the name of every new commodity a household word and the 'eventually, why not now?' doctrine finds ready acceptance. The Postmaster General reports the handling of 23 billion pieces of mail matter annually by his department and the mailing of 23,000 letters every minute of the 24 hours. These are partial but striking evidences of our dependence upon paper for the everyday affairs of life. Our annual use of paper per person is twice as great as in Great Britain, and very much more in excess of that of any other country in the world.

"Benjamin Franklin, in his capacity of Postmaster General, reported 25 newspapers in the Colonies in 1771 as indicative of progress at that time. What would he have said at the idea of more than 20,000 now with sixty percent of the world consumption of news print used in the United States? Assuming that the average newspaper is half advertising, nearly a million and a half tons of news print paper alone will be used in the United States this year for advertising purposes. This is a broadside that would cover more than six million acres. He who is statistically minded may translate this into advertising parlance of column inches and tell us how they would compare with the diameter of the solar system if placed end to end.

"It has been calculated that a cord of wood will make the equivalent of 96,000 ordinary newspaper pages," said Mr. Kellogg, "and we hear a great deal of the tremendous forest destruction caused by paper making. As a matter of plain fact, the paper maker is one of the minor users of the forest and as many cords of wood are burned for fuel every year as have gone into paper in the sixty years since wood was first used in any quantity for this purpose in the United States. Our threatened timber shortage in North America does not come from forest use nearly as much as from forest abuse. Had fire been kept out following cutting and had not immense areas of mature timber been burned in the United States and Canada, we should have little worry concerning future supplies of forest products. Fires are mostly due to human carelessness. According to the report of the Conservation Commission, 65 per cent of the forest fires in the State of New York in 1924 were caused by hunters, fishermen, campers and smokers, with the smokers alone causing one fifth of the total. We cannot continue to burn our forests and have them too."

Buy Old Plant of American Strawboard Co.

TIFFIN, Ohio, June 8, 1925.—The abandoned Tiffin plant of the American Strawboard Company was bought Monday by trustees of the Junior Order National Orphan's home, whose lands it adjoins in the northeast section of Tiffin. It is hinted that the large factory building will be used for the industrial training for the 1,100 children in the home. The strawboard company abandoned the plant following complaints that the Sandusky river water was poisoned.

Amityville Paper & Twine Company Formed

AMITYVILLE, N. Y., June 8, 1925.—The Amityville Paper and Twine Company has been organized here to deal in paper, twine and various paper specialties such as plates, boxes, bags, etc. Mario Esposito is head of the new concern.

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BLEACHED SULPHITE

Using "Eastco" Bleached Sulphite ourselves, testing it day by day, in producing our line of "Eastco" Fine Writing Papers, we have complete control—because we have complete knowledge—of its quality, uniformity and adaptability to the requirements of the paper maker.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G.MacNAUGHTON, Secretary

Report of Superintendents' Educational Committee*

By R. W. Jenkins, Chairman

Your Committee on Vocational Education in the Pulp and Paper Industry, in preparing this report, made a pretty thorough investigation of what has been said and done by other committees of the pulp and paper industry of the United States and Canada; and we want to emphatically say that the pulp and paper makers of United States are "driving on" in vocational education work. They are driving on because they believe that in the industrial world today every industrial worker needs training. This need grows not alone out of the necessities of the employee but out of the interests of the employer and of the public as well.

The inefficient, poorly trained worker not only fails to achieve the highest personal satisfaction by the effective use of his natural ability, but he also interferes with the productiveness of others and retards economic progress.

Whether industry contributes effectively to the common welfare or is wasteful of human life and energy depends largely upon the leaders of that craft or industry. Furthermore, many industrial leaders feel that a training course is necessary to induce desirable men to seek employment in their plants.

Committee Members

Due to the location of the members of this committee, it was compelled to do its work by correspondence, hence the work was somewhat limited.

The committee is composed of the following members:

R. H. Laftman, Manager, Bogalusa Paper Co., Bogalusa, La.

Fred Cranhold, Gen. Supt. Kimberly-Clark Co., Appleton, Wis.

G. P. Hambrecht, Director State Board Voc. Ed., Madison, Wis.

Joseph H. Slater, Manager Escanaba Paper Co., Escanaba, Mich.

Alfred E. Bryant, Gen. Supt. Bryant Paper Co., Kalamazoo, Mich.

C. A. Brautlecht, Professor of Chemistry, University of Maine, Orono, Me.

R. W. Jenkins, Vocational Education, Ohio State University, Columbus, Ohio, Chairman.

Most of the members of this committee took an active part in developing this report, and it was the consensus of this committee that due to the fact that there is considerable of information available as to what has been done in vocational education in the pulp and paper industry, the committee thought its services should be in the nature of a survey of ideas and plans for training future paper makers.

Scope of Survey

The following questionnaire was sent to approximately twenty paper mills in different parts of the United States:

"In order to assist the Educational Committee, appointed by the American Pulp and Paper Mill Superintendents' Association, in getting hold of material from which may be developed a report on educational work in the pulp and paper industry, we would thank you very kindly for your ideas and suggestions on the following questions:

1. What kind of organization should control apprentice training in the pulp and paper industry?
2. How is the training to be supervised?
3. What is to be included in the apprentice course?
4. How shall the instructor be secured?
5. What must be his qualifications?
6. Do you favor courses for the older paper makers, based on the texts developed by TAPPI?
7. What method of instruction would you suggest to use in giving these courses—correspondent, class study or both?"

Ideas Proposed on Question One

What kind of organization should control apprentice training in the pulp and paper industry?

The discussions on Question One reveal two general ideas of the kind of organization which should control vocational education in the pulp and paper industry. The first method of which we wish to speak is that presented by Fred Cranhold, Supt. Kimberly-Clark Co., Kimberly, Wis. Mr. Cranhold's is typical of the ideas presented in some of the reports from other mills, so we are using it, with some modifications, as a type and naming it the First Method of Control.

Method One

1. An educational commission of the TAPPI employing a full time educational secretary or director, responsible to the commission.

2. The educational commission to be made up of practical men for each department of the paper industry. Such as sulphite, groundwood and paper machinery.

3. The educational secretary or director should be a man well founded in educational psychology and pedagogy with successful period of adult teaching and training of men in industry.

4. The commission should keep free from political and labor groups, also from State apprentice schools and vocational schools until the craft knows what it wants.

This plan is similar to the plan in use in the United Typothetæ

* Delivered at the annual convention of the American Pulp and Paper Mill Superintendents' Association, Niagara Falls, N. Y., June 5, 1925.

of America. The Typothetæ has an educational committee and an educational director, responsible to the educational or advisory committee. This method is predicated upon craft control and financial support. The educational director works directly with the man in charge of the educational work in the industry.

Method Two

The second method of control requires an educational committee, responsible to TAPPI with an educational director working with the State Department of Vocational Education. This method enlists the services of the State under the Smith-Hughes Act, in supervision and financial support. This method also enables the papermaker to use some of the public tax money in training the men in his plant. It is, perhaps, less expensive than the first method and the efficiency of either method can be known only by a tryout on the job.

Question Two

How is the training to be supervised?

Method One

The training should be supervised by an educational engineer in each plant. The educational engineer should keep in touch with the educational director of the national commission.

Method Two

The work should be supervised by the State, local or plant director of training, in cooperation with the director of education of the craft.

Question Three

What is to be included in the course?

Method One

In setting up a course for apprentices it is necessary to make a proper reasearch to determine just what facts and practices should be taught to each branch of the trade. We should guard against wholesale teaching of such subjects as arithmetic, chemistry, physics, etc., until we know just what is needed. We should not try to teach too much. The outstanding objective is to make good craftsmen and not college graduates. The course of study should be delayed until a job analysis is made of each trade. The procedure should be what to teach and then how to teach it.

Method Two

The course should include a correspondence and class study based on the books developed by TAPPI. Also a course should be developed on job analysis of the important jobs in the industry. This analysis should cover operations, tools and equipment, trade terms, materials, stock recognition, dangers and technical operations such as mathematics, drawing and science.

Question Four

How should the instructor be secured?

Method One

The instructors should be carefully hand picked and trained to use the teaching tools, and this is just as necessary as it is to be able to use tools with which to make paper. The director of education should provide the teacher training for the instructors. This training need not take more than twelve or sixteen hours of class work to become fairly acquainted with the necessary teaching tools. Furthermore, a good tradesman can be taught how to teach easier than the professional teacher can be taught the trade science.

The plant educational engineer should be held responsible for the organization of classes in the plant, also for the proper selection of instructors.

Method Two

The selection of instructors might be made by the director of training in the plant. Also by the cooperation of the director of training in the plant and the State Director of Vocational Education.

Question Five

What must be his qualifications?

Method One

He must have human sympathy, and know how to handle men.
He must have trade experience.
He must know teaching methods.
He must know the science of paper making.
He must not be a shift worker.

Method Two

Same as method one.

Question Six

Do you favor courses for the older papermakers based on the texts developed by TAPPI?

Method One

Yes. We think this is the place to begin the educational work. We should spend most of our effort on getting the men now in the trade, to make a deeper study of their job from a mechanical and human engineering standpoint. This may be done by a foreman conference course, bearing heavy on job analysis from an instructional viewpoint. If the foremen are handled properly—and this can be done only by letting the men know what you are trying to do, and enlisting their support instead of their ill-will—an apprentice training program can be put over much easier.

Every modern papermaker wants to know more about his job and if courses can be developed that are of interest and value to the man on the job, it will be no difficult job to sell him the course.

Method Two

Yes. The men on the job who are practical papermakers want to know what the other fellow's ideas are relative to their job. The books developed by the Technical Association of the Pulp and Paper Industry make this possible. Then, too, most papermakers are interested in the advancement of their job and have a desire to grow.

Question Seven

What method of instruction would you suggest to use, in giving these courses—correspondence, class study or both?

Method One and Two

All reports from the different mills favor class study where possible. In the smaller mills the correspondence course has some preference. Correspondence with some individual instruction was suggested for small plants.

It might be of interest to some papermakers to know that there are more people taking correspondence courses in the United States than there are students in the colleges and universities. Furthermore, the Chicago University makes the statement that where a student does his preparatory work by correspondence, he does better college work than the fellow who did his prep work in class. The correspondent student must read and study the text, then write his answers. So if the student has pep enough to go through a correspondence course he has possibilities for future success.

In conclusion, we should like to say that any plant in order to put on a training program successfully, may expect to spend some time and money, but the cost of education is nothing compared to the cost of ignorance. Furthermore, we believe that the cost of the finished product should include the cost of the training of the workman.

Pettibone-Cataract to Stop Making Paper

NIAGARA FALLS, N. Y., June 8, 1925.—The Pettibone-Cataract Paper Company will cease to manufacture paper at its mill here not later than June 30. The plant has been sold to a power concern whose definite plans for the use of the property have not been learned.

Power Problems for the Plant Engineer*

By R. W. Leeper[1], Power Engineer, H. S. Taylor, Dayton, Ohio

The power problems of the pulp and paper mill is a subject which can provide the material for a general discussion as no other subject can, for even in mills similarly located and producing similar grades of product, the conditions as regards their power supply and application can be widely divergent.

The ideal for which we all strive is the attainment of a maximum output for a given investment in plant and for power. In the paper mill the power problem is ever increasing on account of rising costs, the demand for increased production per unit, and the resulting increase in power consumption. It is therefore essential that all factors entering into the economical generation, distribution and utilization of energy be thoroughly considered.

Steam Cost Should Be Known

Even today it seems to be the established practice to compare one mill with another from a power standpoint, on the basis of tons of paper versus tons of coal, a probably erroneous basis when the many variables there may be between coal pile and shipping platform are taken into consideration. While the refinement in records evident in central station practice may not be necessary, the paper mill power plant should be equipped with sufficient instruments to determine whether the boiler plant coal consumption per thousand pounds of steam is consistent with good present day practice, and further, whether the steam so generated is economically utilized, and not exhausted to atmosphere.

Exclusive of raw materials, power including steam is one of the largest items of expense in the manufacture of pulp and paper varying from approximately 15 to 50 per cent of the cost of the finished product. In spite of this fact, until rising costs during the last few years brought the power question forcibly before them, many executives looked upon their power plants as unimportant and either neglected or disregarded the opportunities presented for effecting economies as long as the supply of these essentials, steam and power, was ample to meet the demand and there was no interference with production. In other words, power in the paper mill is considered as a byproduct and not as an absolute and expensive necessity.

This attitude has resulted in the plant engineer being left more or less to himself and with but meager contact with the other departmental heads, thus divorcing in a way the power plant from the organization, it being considered only as a necessary evil. Under these conditions it was inevitable that few if any records would be kept, except possibly the total cost per month or year, and this cost was frequently estimated from incomplete records. Coal, the major item of expense, was purchased without due consideration of any quality except price per ton, dumped into the boiler room and the firemen instructed to burn it, no other material entering into the conversion cost being handled so carelessly.

Such conditions applied quite generally through the earlier days of the industry with the result that many steam and power installations and applications that were not entirely suited to the demand either from an economical or operating standpoint were made, many of which are still in operation. Further, the ever-growing demand for greater production, which inevitably increases the power demand, unless the efficiency can be proportionately increased, creates many and varied power problems, that may be considered under two heads —first, the problems incident to an existing installation—second, the problems encountered due to additions or entirely new installations.

For an Existing Installation

For an existing installation, while definite and conclusive recommendations cannot be made without a careful study of that plant, in endeavoring to effect economies the following factors, among many, should be carefully considered as presenting the greatest possibilities for savings.

The Boiler Plant

1—Is the Fuel of Proper Quality for High Economy, Considering the Equipment, and Consistent with its Cost?

2—Are the Boilers Clean?

Scale or soot of varying thickness up to only ⅛ inch, as is well known, may reduce the heat transfer through tubes 12 to 15 per cent and thus increase stack temperatures and reduce economy.

3—Are the Settings Practically Air Tight?

Air in excess lowers furnace temperature and tends to overload the stack, which may reduce the draft and also the boiler capacity. In well cared for settings the air inleakage is generally 25 per cent or more of the total gases. This chimney loss is usually the largest and offers possibilities for the greatest saving.

4—Combustible in the Ash.

Loss of combustible in the ash varies from 1 to 20 per cent, the average being in the neighborhood of at least 5 per cent, whereas it is generally admitted that this loss in a heat balance should not exceed 3 per cent.

5—Feedwater Temperature.

The boiler feed water temperature should be maintained at the highest practical temperature, as each 11 degrees rise in temperature means a fuel saving of approximately 1 per cent, and in addition the boiler capacity is increased in nearly the same proportion.

6—Are There Any Steam Leaks?

Assuming 13,500 B.t.u. coal 65 per cent combined boiler and furnace efficiency, every 100 pounds of steam wasted to atmosphere is the equivalent of 11 pounds of coal and a ⅜ inch leak to atmosphere with from 15 to 150 pounds pressure is costing the mill from $51 to $281 per month, assuming a nominal steam cost of 50 cents per thousand pounds.

Further, in this steam there are the following heat units per pound, assuming 200 degrees feed water temperature.

From 200 Deg. F. to 212 Deg. F.	12 Btu
From 212 Deg. F. water to 212 Deg. Steam	970 Btu
From 212 Deg. F. steam to 150 lb. gage pressure	45 Btu
Total	1027 Btu

In other words 95 per cent of the heat added is required to change the water into steam without increasing its temperature. Using this steam for power with a back pressure unit at 20 pounds pressure 11.5 per cent of the heat units are available for power and 88.5 per cent for process work if this steam be utilized as a heating medium.

The Mill Proper

7—Waste of Steam.

Allow no steam to escape to atmosphere unless absolutely unavoidable.

8—Use Exhaust Steam.

For drying, heating, etc., use exhaust or extracted steam to the greatest possible extent. The pound of steam used first in an engine or turbine and then for process work will replace approximately 1½ pounds required where the prime mover is operated condensing and live steam used for these purposes.

9—Line Shafting.

See that long line shafts are kept lined up, thus eliminating unnecessary friction and avoiding future breakage.

10—Belts.

Eliminate belt trains by rearranging equipment where practical; while the efficiency of one belt may be 90 per cent that of a train of four belts, a not unusual condition in mechanically driven mills with the same conditions, is but 65 per cent, and in actual operation, considering the counter shafts, probably still lower.

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[1] Member TAPPI.

11—Pipe Insulation.

See that all steam lines are kept covered with a good insulating material.

12—Reduce Number of Steam Lines.

Eliminate duplicate steam lines and long small runs, generally uncovered, to water barrels, wash basins, heaters, etc.

13—Waste of Water.

Reduce water consumption, therefore power, by frequent trips through the mill to see that faucets, hose and similar connections are turned off when the workmen have finished with them. Power for pumping is always a large item and cases are known where it was reduced 20 per cent in this way.

14—Waste of Electric Light.

Reduce the power consumption for lighting by seeing that the lights are turned off when not required. Frequently a trip through a mill in the daytime will show many large lamps burning unnecessarily, the power loss of which in the aggregate would be surprising, and in addition, maintenance is increased, due to the reduced life of the lamps for necessary and useful lighting.

15—Leaking Steam Traps.

Repair or replace leaky traps, valves, etc. Leaks to atmosphere are readily noticed and attended to, while the discharge from traps, valves, etc., may be buried in water or otherwise concealed, therefore the best is none too good for these purposes.

In New Installations

For new installations wherever they may be located, it is generally admitted today that motor drive should be selected in preference to mechanical drive, as it has demonstrated its superiority in the following respects.

1st—The power plant, either steam or water driven, may be located where the greatest economy will be obtained and likwise the manufacturing buildings may be erected where most advantageous to production, irrespective of location of power plant.

2d—Power can be more efficiently distributed electrically than by any other known method.

3d—Long line shafts, counters, belt trains, gears, idlers, and other similar devices for the mechanical distribution of power, that are not only inefficient but also costly to maintain, can largely be eliminated.

4th—The generating plant may be divided into two or more units, thus insuring at least partial operation in case of a breakdown, and permitting economical operation of individual sections.

5th—A number of small water power plants that could not be economically utilized for mechanical drive may be combined and the power efficiently applied.

6th—With proper subdivision, a machine or department may be shut down without interfering with other equipment.

7th—Additions or alterations may be made without interfering with the operation of the existing equipment.

8th—The existing mill power may be supplemented with power from other sources as required.

9th—Subdivision of the drives permits the power consumption to be readily determined, and also the operation of the equipment at the speed required to produce the best product with minimum power consumption.

10th—The reliability, high economy and flexibility of motor drive for paper mill service compared with mechanical drive is unquestionably in favor of the former.

Power Used in Four Forms

In the mills of today power in general is used in *four* forms, namely—steam, either through electrical or mechanical distribution—hydroelectric and direct water power, and applications of these forms will be found in many different combinations of primary and secondary prime movers.

Steam Power

From a cost standpoint, steam power is the highest with the others following in the order given.

Steam, however, can be used in two ways, that is, first for power, and second, for heating, and when so used the power generated usually costs less than even hydroelectric. The steam for heat being a necessity, the cost of this power is represented by the combustible and the fixed charges on the power equipment, and in order to replace this steam power with hydroelectric, the latter must be delivered under $12 per horsepower year, with prevailing coal prices. As a matter of fact, power so produced is one of the cheapest forms, if not the cheapest known today.

As a further indication of its economy, may be mentioned the fact that where the exhaust steam from a prime mover can all be used for heating purposes, a kilowatt hour can be produced for about 5000 B.t.u. compared with about 19,000 B.t.u. for a large steam Central Station, and to know that the use of steam in this way is recognized and made use of by the paper industry, to a greater extent perhaps than by any other is most pleasing.

The power installations for new mills may therefore be properly divided into two classifications—first, those where low priced water power in one form or another is available in abundance, and steam power is limited to that which can be developed with the steam demanded for process purposes—and second, the mills where steam power must be depended upon for the entire operation.

Between these two primary classifications of By-Product Power and All Steam Power mills respectively will be found many variations and combinations, but each mill may in itself, from a power standpoint, be so subdivided, and this division is the first step in the solution of its power problems.

By-Product Power

For mills of the By-Product class the places where steam power may be utilized must first be determined as the power demand is continuous, while the steam demand is to a certain extent variable, depending upon seasonal or manufacturing requirements. Therefore, back pressure prime movers should, as a general rule, only be used for driving equipment where there is practically a fixed ratio between power and steam demands, otherwise there may be either more power developed than can be utilized or a waste of exhaust steam to atmosphere. With this in mind, it is evident that the applications are practically limited to the driving of the paper machine, and the heating equipment where both the power and steam demands are seasonal.

For By-Product mills more steam is generally required for drying the grades of paper produced on a fourdrinier than is required to power the variable line, with but 3 to 5 per cent of the heat units used for power. With these conditions it is apparent that the efficiency of the prime mover is not of interest, as the variable speed requirement makes it difficult if not impossible to utilize additional power from a more efficient unit.

For driving the paper machine there are on the market today many different types of prime movers that may be considered, the actual selection being influenced by many factors of which the following are of major importance—reliability, speed range, regulation, space occupied and initial cost. Steam consumption, it will be noted, has not been mentioned as a deciding factor, for as a rule with such units, the exhaust steam therefrom must be supplemented with live steam makeup to dry the sheet.

The Steam Engine

For mechanically driven variable lines, steam engines, generally twins, with variable speed control gear, are frequently used, the first cost being low, the reliability unquestioned and the speeds suitable for either mechanical transmission or direct connection. When selecting engines for this purpose care should be used, especially if the speed range is high, as the capacity is fixed by the power demand at low machine speeds rather than high, and if this factor is not given due consideration, the regulation may be seriously affected.

Where a high economy steam engine is chosen for driving the variable line, it is sometimes found that the steam supply is not nearly sufficient to dry the sheet, and that a second back pressure

engine may be used for driving the constant line equipment, thus securing this additional power at a very nominal cost. Where such applications are considered, the steam consumption of both steam engines must be carefully worked out if the balance between steam and power demands is to be maintained, otherwise there may be an unavoidable waste of exhaust steam to atmosphere that can only be prevented by replacements.

The Steam Turbine

While steam turbines have been used for mechanically driven machines, this application is still rather uncommon, the disadvantages being—high steam consumption as a rule, and unsatisfactory speed control unless the machine be operated at practically constant speed.

In mills of the By-Product class where electrical drive is selected for the paper machine, steam turbines are generally the choice on account of space requirements, suitable speeds for generator drive, low first cost and freedom from oil in the steam.

Another Source of By-Product Power

Another possible source of By-Product power of which little use has as yet been made is in connection with digesters which require the highest process steam pressure used in the industry, varying as is well known from 80 to about 100 pounds. The installation of boilers for from 350 to 500 pounds pressure or even higher, with steam accumulators perhaps, would make this steam available first for power, and it is predicted that in the future, such an arrangement will be used especially for the new and larger installations where there are no existing conditions to influence the selection.

All Steam Mills

For mills of the Second Class, where low priced water power is not available, and where it will generally be found that steam power, either mechanically or electrically applied, is the cheapest form, the ideal would be an installation where the power demand was obtained from the steam required for process purposes. Such a balance is, however, extremely difficult to obtain and also to maintain on account of the many variables with respect to product or production.

The finer the product, as a general rule, the more difficult it is to effect this balance between power and steam with only back pressure prime movers, thus necessitating the installation of condensing equipment for at least a portion of the load, or a supply of power from an outside source to provide the required flexibility and to prevent waste of steam.

Condensers Frequently Justified

While in a way condensers are undesirable in a paper mill, and the quantity of steam to be condensed should be reduced to the lowest economical point, their installation can frequently be justified, as with condensing prime movers of moderate capacity, a horsepower hour may be produced for from 10 to 15 pounds of steam, where approximately twice this amount would be required using back pressure units. This is not surprising when it is pointed out that from an initial pressure of 150 pounds per square inch to 28 inches vacuum, there is available for useful work 250,000 foot pounds, and from 150 pounds to atmospheric pressure but 135,000 foot pounds in round figures.

In other words, approximately 54% of the available energy is for the expansion from boiler to atmospheric pressure and 46% for the expansion below atmospheric pressure. Assuming that by using back pressure units entirely, there would be 10,000 pounds excess exhaust steam per hour, with condensing equipment approximately one-half of this steam may be saved, or at 50c per thousand pounds, $18,000 per year, the equivalent of a 20% return on an investment of $90,000.

To obtain a balance between steam and power demands in All Steam Power installations, combinations consisting of condensing and back pressuer prime movers have been uesd, the load being shifted from one to the other either automatically or manually, thus maintaining a balance between power supply and steam demand. With this arrangement, however, larger units than are required, due to the load demand, should be used—two liabilities are present, the space requirements are greater, the efficiency of two or more small units is not as a rule equal to that of one having the same total capacity, and the initial investment is likely to be increased.

During the last few years, steam turbines of the bleeder or extraction type, from which steam for process purposes may be bled after its kinetic energy has been used for power production, automatically and in accordance with the demand, have been frequently used for All Steam Power installations. Turbines of this type provide the desired flexibility, high economy in the use of steam, minimum floor space and attendance, reliability, and at an initial cost that compares favorably with any other type of prime mover that may be selected. Extraction turbines are now available of varying characteristics and at corresponding prices from which may be selected suitable units for nearly any requirement.

Factors to Be Considered

Among the many factors that should be considered when laying out distribution systems for steam and power, the following may be mentioned.

Steam

1—Pipe runs should be few in number and as direct as possible. Runs should be properly pitched for drainage, using a minimum number of traps. Expansion must be provided for and the lines suitably insulated.

2—Provide separators or receivers in steam lines to prime movers where saturated steam is used.

3—Specify only proven valves, traps, etc., for it is false economy to consider unproven equipment or materials.

4—So design that all valves, traps and other fittings may be inspected, and when necessary repaired, or replaced with the least possible interference with the system in general.

5—Provide for the return of all surplus exhaust steam and condensate to the feed water heater.

Power

1—Use group drive with a large motor, rather than individual drive, where there are several small units dependent on each other which may be grouped and driven from a short countershaft.

2—Use individual drive where there are single isolated units, or where the units are of high rating; also where belts and counters may interfere with the operation of other equipment.

3—Use line shafts of generous size for the duty, supported on rugged adjustable hangers.

4—Segregate the distribution so that trouble on one circuit will not interfere with the operation of more than one department or machine.

5—Use alternating current motors where close speed regulation is not required over a wide speed range.

6—Use direct current motors for variable speed drives requiring close regulation.

7—Use synchronous motors in sufficient capacity to maintain the power fact at 90% or higher.

8—Limit belt speeds to not over 5,000 feet per minute, preferably around 4,500 feet.

9—Where short belt centers and high ratios must be used, provide equipment to maintain the arc of contact.

10—Standardize the motors, as to capacities and speeds insofar as possible, so that a minimum of spares will serve for the entire installation.

11—Provide instruments so that the power consumption can be determined as may be required by the cost department.

In conclusion it may be said that in general Power Problems in the Pulp and Paper Industry must be solved through a study of the actual or contemplated installation, according to the law of supply and demand as affecting the efficient generation, distribution and application of the two essentials, Steam and Power.

The Waste Problem at Newsprint Mills*

By Vance P. Edwarde[1]

While the problem confronting the news print mills in waste water utilization is more serious than in some other branches of the industry, there is no reason for anyone being discouraged. It is true that the economical disposal of waste sulphite liquor offers special difficulties which are yet to be surmounted. But so far as the proper handling of the paper machine waters is concerned, we firmly believe that practical means are now available to accomplish the purpose. The two problems will be separately considered.

Waste Liquor

The disposal of industrial wastes by discharge into streams has taken place over such a period of time that it perhaps seems the natural method to use. Almost with the inception of the sulphite process, however, chemists began working on the utilization of the organic products dissolved in the liquor. When one stops to recall that over half the weight of the wood is dissolved in and thrown away with the waste it is readily seen that an enormous field of research is opened up. In fact, one very famous chemist has made the prediction that in the years to come sulphite pulp will occupy the same position with respect to the materials recovered as coke now does to its valuable byproducts.

Suggested Uses

Without reviewing the literature on this subject in detail some of the more important suggestion uses of sulphite waste liquor may be cited. Probably first in order of importance is the production of alcohol through the treatment of the waste and fermentation with yeast. This alcohol must not be confused with that obtained from the destructive distillation of wood; it is a nearly pure ethyl or "grain" alcohol. The use of the waste liquor in the production of a core binder for use in foundries is the subject of patents, as is also the preparation of a material which is to be used in conjunction with true tanning agents in the tanning of leather. Sulphite liquor has also been used as a road binder and, upon concentration, as an adhesive. It has also been evaporated to dryness and destructively distilled with the production of a vile-smelling gas of about half the heating value of coal gas. The most recent development is the disposal of the waste liquor by concentration and incineration under boilers. It is claimed that enough heat can be obtained from the burning of concentrated waste liquor to carry on the required evaporation.

Quantity and Value Large

One of the greatest difficulties now in the way of fuller utilization of this material arises from the fact that the quantities of liquor are so huge. For every pound of pulp about nine pounds of liquor are set free, containing one pound of solid material. Furthermore, it is impossible to recover more than 60 per cent of this liquor in undiluted form.

Although the values represented in sulphite wastes are enormous, the prices of its derivatives are largely controlled by those of competing products, and developments are thus restricted. A case in point is the production of alcohol. Only one plant in this country has ever operated at all continuously, and it was forced to close very shortly after the war because of the enormous drop in prices. At present, I believe, it is again in operation. Only one alcohol mill out of over 20 in Sweden is now in operation, all the others having been forced to suspend, so that the utilization of waste liquor as alcohol seems to hold out little promise for the immediate future. It might yet prove feasible to concentrate and burn the waste liquor after fermentation and distillation, but this line of attack, so far as is known, is not being followed up. The limited use of the other products mentioned precludes their serious consideration in the solution of the problem as a whole. The one remaining possibility, noticed above, is that of evaporating and burning the liquor. This method seems to offer a way out of the immediate difficulty, but it necessarily prevents the recovery of any of the dissolved materials.

Hope for the Future

We at the Forest Products Laboratory are convinced that the greatest hope for the future lies not in finding means of utilizing, even to a small extent, waste liquor of the present chemical characteristics, but rather in the developmeint of new methods of pulping which shall be steplike in character, and the utilization of the chemical products split off from the reaction at each step. Such a process cannot be developed in one year or probably even in ten. Of this, however, we are sure: The ultimate economic solution must come through a complete utilization of the various chemical products of pulping rather than the utilization of the pulp alone and the "disposal" of the remainder. So little is known about the fundamental chemistry of the sulphite process, and of the waste liquor in particular, that the field is practically unlimited and the enormous effect required in its exploration amply warranted.

Fiber in Waste Liquor

Aside from the losses of matter dissolved in waste sulphite liquor, a comparatively small loss of long fiber takes place, amounting to about 5 pounds per ton in a well operated mill. Any loss from this source should be practically eliminated if suitable drainer bottoms are installed in the blow pits.

Heat Losses

Without discussing the question at length, I should like to bring to attention in this connection the enormous heat losses which occur during the normal cycle of digester operation. From my own experience I believe that more than half of this heat can be recovered in usable form, and that at not too great an expense.

Fiber Lost in White Water

The average of several tests made on a news groundwood mill producing 76 tons a day showed a fiber loss of 4.5 tons, or 6 per cent, and a water consumption of 38,000 gallons per ton. Only about half of this water was paper machine white water.

However, a groundwood mill lends itself very satisfactory to a practically closed system, and the only objection which has been found to date to a completely closed system is the gradual accumulation of pitch in the circulating or conveying water. Whether this trouble can be overcome by the use of a clay like Bentonite has not as yet been proved, but the indications are favorable. It is possible to recirculate a very large proportion of the water in a groundwood mill without encountering any serious difficulties.

Stopping White Water Losses in the Paper Mill

The white water discharge offers the greatest incentive to the recovery of fiber and the reuse of the water, and the fact that greater effort has not been put forth in these directions I cannot help but feel is due to the incredulous attitude of mill superintendents. Of course, the mill manager must be "sold" on the ideas of reusing water, but it is a foregone conclusion that unless the superintendent himself is an enthusiast no progress can be made. The prayer of many a superintendent might be phrased as "O Lord, give it to me fresh and plenty of it," and they shun white water as the Evil One is said to abhor the holy font. In a large number of mills today the water consumption per ton of paper made is in the neighborhood of 40,000 gallons and the fiber loss around 10

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per cent. In contrast to such a situation, actual instances can be cited of American mills where every gallon of water is measured and the consumption reduced to as low a figure as 3,000 gallons per ton, with a loss of only 1 to 1½ per cent of fiber.

Intelligent Care Required

It must not be taken for granted, however, that this very desirable condition can be attained by merely wishing. A careful study of the amount and richness of white water from various sources must be conducted, and the pulp saver equipment when installed must receive intelligent care. All wastage of fresh water tending to increase the volume of white water, such as the continuous running of a hose into the wire pit, must be stopped. The importance of such precautions is illustrated by the fact that a 1-inch hose under 40 pounds pressure will discharge 350,000 gallons in 24 hours. Furthermore, steps must be taken to prevent floor washings contaminating the machine white-water, as nothing will so surely disgust a superintendent with the whole recirculation proposition as to get oil in the stock.

For the best operation it is advisable to divide the wet end of the machine according to the richness of the white water produced. Unless there is some valid reason which will prevent their use on fast running news machines, trays should be installed and the water properly combined with that from the suction box and suction couch. No specific rules can be given which will apply to all mills, but the general principle of separating and recovering the fiber in the various white water at the source is of prime importance to the successful operation of a closed system.

In general, the recovery of white water and its reuse is simpler in a news than in a book mill, although at any mill where a large proportion of groundwood is used it is hardly possible to attain as high an efficiency as is reached by mills using a 100 per cent furnish of long-fibered stock. News mills are fortunate in that the infrequency of color changes will permit the use of settling tanks of large volume.

Recovered Fiber Can Be Used

Despite the fact that their arguments have been disproved again and again, there are still those who persist in condemning the fiber recovered from white water. The fact that such fiber was satisfactory for papermaking purposes before it went on the machine should be sufficient proof that anything which may have happened since is in some way the fault of the mill. This is not to say that a satisfactory white water recovery plant can be operated by allowing the fiber to slime and decay before it gets back on the machine. But if the recovered fiber is put back on to the wire at the earliest moment, a system free from trouble will be practically guaranteed.

Some advantages directly connected with the reuse of white water which are not generally considered are better opacity and formation and, if alum is used, a very appreciable reduction in the amount required, depending upon the original hardness of the water. Furthermore in cold climates a fairly large amount of heat is absorbed by the fresh water. This source of loss would also be eliminated if the greater proportion of the water were recirculated, with a corresponding improvement in machine conditions as a result.

A Closed System Possible

I am not as doubtful of the success of a closed system as I was a few months ago. What I have seen very recently leads me to believe that such a system is within the range of practical operation, so that the water lost need only be that evaporated from the sheet going over the driers.

In the foregoing I have considered the paper machine as a separate operating unit, but in those mills which produce their own groundwood and sulphite an obvious and very satisfactory outlet is provided for any excess white water from the paper mill. The only complication to be guarded against is the use of colored water in white furnishes.

Types of Pulp Savers

There are two general classes of savealls in use, the first in which the white water is passed through a filtering material and the second in which the pulp is settled to the bottom of a tank and so recovered. Without discussing the various types in detail, it appears that devices of the first class will be most efficient when handling all long fiber. They will show their minimum efficiency when handling a discharge containing short fiber and clay, in which case the settling tank is the most satisfactory equipment. News print, lying between the two extremes, can use either or possibly both classes of apparatus to advantage.

Measuring White Water Losses

Judging from such information as is now available, the average fiber lost in all the paper mills of this country is in the neighborhood of 7 per cent. It is not a difficult matter for a superintendent to determine whether the fiber loss at his mill is above or below the average, provided the sewers are in accessible locations. Even where they are not, the volume and fiber content of the white water can be determined if it is gone after wholeheartedly. In general, the best as well as the simplest instrument for measuring volumes is the rectangular weir. It can be satisfactorily installed by any millwright, if a few precautions are observed regarding its location and proportions. Water level recorders can be obtained at no great expense and when installed will afford a thorough record of the fluctuations and the volume of white water.

Continuous Sampling Necessary

Quite as important as measuring the volume is a continuous determination of the proportion of solid material carried out. While samples taken at irregular intervals may give a general indication of operating conditions, accidents will happen in the best regulated industries. At times, particularly during the night shifts, large quantities of fiber may find their way to the sewer and thence to the river. A continuous sampling device is therefore an indispensable adjunct of the water-level recorder. By the means of these two instruments the whole story of the effluent is open to inspection. Furthermore, leaks and poor operation can be detected before they have had an opportunity to cause a serious loss.

The usual method of determining the amount of solid matter in any sample selected for examination is to filter a definite quantity, say 50 cc., through a tared and fluted filter paper. In case filler is present, it becomes necessary to ash the combined solids, the loss in weight representing the fiber. A much more rapid method where no filler is present, and one which has been found entirely satisfactory for routine mill operation, is to centrifuge in an oil-separation tube 50 to 100 cc. of the white water. Then by reference to a previously prepared table the number of ccs. of solid matter thrown down to the tip of the tube is readily converted to pounds per thousand gallons. The centrifuge test is so simple that after it is once established the laboratory boy can atten to it. It will be of greater assistance in the control of the mill white water problem as a whole if separate tests are made for the various machines where a loss can occur.

Cost of Save-All Equipment and the Savings Possible

In a 100-ton mill the saving of 1 per cent of the stock based upon production, with stock valued at $25.00 a ton, would amount to more than $6,000 a year. The cost of installation and operation of a power-driven save-all for the same period would be a little over $5,000, leaving a credit balance to the save-all equipment of over $1,000. For a mill of the same size sedimentation tanks may cost from $4,000 to $18,000, and if we assume that two $9,000 settling tanks will recover 2 per cent of stock valued at $25.00 a ton, the yearly gross saving will amount to more than $7,000, with an operating cost of $3,000, which includes interest on the investment. A home-made tank can be constructed without a great deal of difficulty or expense and can be made to recover

over 90 per cent of the waste. The first cost would be in the neighborhood of $2,000 for each saveall, and one should be on every machine.

Saving $10,000,000 Per Year Possible

Aside from the actual money saving, the conservation feature of fiber recovery is of great importance. If we take the production of all grades of paper in the United States for 1924 at 7 million tons and assume but 1 per cent of the production recovered through proper saveall equipment, the amount will be 70,000 tons. As pointed out previously, the average fiber loss in white water at all mills is well over 7 per cent of the production, a waste which by proper methods could be reduced to 2 per cent. The result would be a saving of 350 *thousand tons* having a total value of 10 million dollars.

Paper Mills Affected by Legislation

The subject of stream pollution has been widely agitated by various enthusiasts who were without a thorough knowledge of conditions. Erroneous conclusions have been drawn by untrained observers, and various industrial wastes have been subjected to blame out of all proportion to the actual damage they have caused. Nevertheless, from investigations that have been conducted in New York and Ohio, it seems safe to conclude that wastes from industrial plants as a group are more damaging to fish and plant life, either directly or indirectly, than domestic sewage. In reply to a questionnaire which was sent out to trained observers, 49 per cent agreed with the above conclusion, 10 per cent were not sure but thought it probable, and only 5 per cent definitely answered in the negative. The term pollution as used here does not mean the addition of actual disease germs, but rather of media which destroy the natural revivifying power of streams and by reducing the amount of the soluble oxygen in the streams prevent the growth of proper fish food and water plants.

Undoubtedly the best purpose to which some streams can be put is that of a carrier for industrial wastes, but others are doubtless now polluted to a far greater extent than is advisable or allowable and will have to be cleaned up.

Effects on Communities of Pollution

When industry was young and populations were smaller the pollution of streams was not a serious matter. Now, however, conditions have reached a danger point in many localities, particularly in those sections of the country which have to depend upon the rivers, for their drinking water supply. In one case a community has found it necessary to double-treat their drinking water in order to be assured of its purity. Dilution of the effluent determines in general the degree of harmfulness of a discharge, and a study of various industrial wastes conducted by the Conservation Commission of the State of New York indicates that sulphite liquor in the proportion of 1 to 100 is fatal to bass. In this connection it may be remarked that different types of fish show widely varying powers of resistance to industrial wastes, trout being the least resistant. Bass and perch belong in a middle group, and the bullhead in the most resistant.

State Officials Broadminded

Various states are now conducting stream surveys in order to determine the degree of pollution existing. In every case with which I am familiar the attitude of the State officials toward the industries is of an extremely broadminded character, and every indication is that cooperation is the keynote of their program. The States themselves are entering into cooperative agreements which cover the steps to be taken in the control of pollution of interstate streams. The tanning and the milk industries are following a similar course, having pooled their interests in establishing central laboratories for the thorough study of their particular problems. It is doubtful if such steps are necessary in the news print mills, although an organization within the industry devoted to fundamental research of pulping would doubtless go a long way toward solving the waste sulphite liquor problem. But this I am afraid is too much to expect in the near future. It can be taken for granted, however, and without any reservations, that unless the various industries, pulp and paper included, show a serious desire to reduce the stream pollution occasioned by their inividual plants, they can be assured of more drastic legislation being enacted by the various States than is even now being agitated, and that at no distant date.

The White Water Committee

It was in 1922 that the general committee on waste in the industry was appointed by the Technical Association, and at yearly intervals or oftener the subcommittee on white water losses has brought the matter to your attention through talks or published articles. In spite of all the agitation, little has been accomplished so far as the industry as a whole is concerned, although a few of the more progressive mills are undoubtedly reaping the benefits of more complete white water utilization. This year it was agreed by the Technical Association and the Forest Products Laboratory that more progress could be made if a sufficient number of mills were interested to the extent of turning in a monthly white water questionnaire to the Laboratory. There the information would be tabulated and resubmitted to the cooperating mills without, however, disclosing the identity of the individual responses. Among the news print mills this work has recently been taken over by the News Print Service Bureau, and it is hoped that more mills will become interested to the extent of exchanging facts of operation. Costs are no longer kept secret so that no valid reason is apparent for failure to exchange information about white water.

Résumé

The sulphite waste liquor problem is still far from being solved, although some progress has been made toward a partial solution under present conditions; and the hope is that pulping may ultimately be carried on in a series of steps, each step producing materials which can be readily converted into chemicals of value.

The groundwood waste water problem is one principally of mechanics and has already been solved in the more progressive mills.

The same general statement as above holds true for paper machine operation, although here the value of materials recovered is higher and the incentive should therefore be greater. It is our conviction at the Laboratory that the results here suggested can be accomplished with the expenditure of comparatively little money and effort. The savings will not only repay the cost of the equipment in a short time but will also improve the quality of the product, remove the stream-pollution bugbear, and carry the country one step forward toward a more complete utilization of our forest resources.

Stevens & Thompson Build Boiler House

[FROM OUR REGULAR CORRESPONDENT.]

NORTH HOOSACK, N. Y., June 1, 1925.—The Stevens & Thompson Paper Company has under construction at its North Hoosack mill a large boiler house which is a step in plans of the company for increasing the amount of power available for operating purposes. The building is of modern, heavy construction and work thereon is progressing rapidly. The new power plant will have a capacity of 1,000 horsepower, the equipment including two large boilers of the Babcock & Wilcox type each capable of generating 500 horsepower. All of the equipment to be installed will be of the newest type and will include automatic stokers and coal crushers. The new power house will have a smokestack 175 feet in height.

The Stevens & Thompson Company has disposed of a large tract of land in the vincinity of the Middle Falls Mill to a newly organized golf club of which L. G. Thompson is vice president. The property which was purchased a number of years ago by the Stevens & Thompson Company is along the south side of the Battenkill between Greenwich and Little Falls. The property is very valuable from an industrial viewpoint.

Pulp Yields from Spruce and Balsam*

By G. J. Armbruster[1], Superintendent, Fraser Companies, Limited

Different authentic sources have told us about the cellulose content of the different species of wood. Taking into consideration such wood as spruce, fir and hemlock, the difference of cellulose contained between these species is given as being about 8 per cent.

My suspicions having been aroused at various times to the effect that a greater difference might exist, I determined to check this up whenever possible and I came to the conclusion that all the cellulose mentioned as being contained in some of the woods, especially those other than black spruce, was hard to get, at least by the sulphite process.

The figures given were checked several times, and while not always the same, they were at least constant enough to find an average in the same proportion and which when converted into dollars and cents mean a lot to the sulphite man. In fact, I firmly believe that the question of yield is the deciding factor as to whether or not the pulp mill will make or lose money, when located where the wood has to be hauled by rail to such points as Niagara Falls.

Black Spruce, White Spruce and Balsam

When using rossed black spruce from Northern Ontario on the Transcontinental Railway, at points known as the height of land, it took 1.51 cords of wood to produce one ton of unbleached sulphite (1324 lb. per cord).

When using rossed wood containing what was called 60 per cent white spruce and 40 per cent balsam fir from the Province of Quebec, south of the St. Lawrence river, it took 1.80 cords to produce one ton of unbleached sulphite (1111 lb. per cord).

When using sap peeled balsam fir, from the same locality, it took 1.98 cords of wood to produce a ton of unbleached sulphite (1010 lb. per cord).

This was checked several times with slight variations, but in each case was found to be about the same figure.

Please note that it takes 19 per cent more wood to make a ton of pulp out of mixed white spruce and balsam fir than it does from black spruce, and 31 per cent more wood to make a ton of pulp out of sap peeled balsam fir than it does of black spruce.

Difference in Wood Values

Therefore, according to these figures based on the yield alone, if a cord of rossed black spruce is worth $20 per cord delivered at Niagara Falls, the cord of rossed wood containing 60 per cent white spruce and 40 per cent balsam fir should only be worth $16.77, and the sap peeled balsam fir should only be worth $15.25 per cord delivered at the same point. This in itself is a great difference, but let us proceed further.

The sulphite mill superintendent usually establishes a certain cooking schedule, which for reasons such as quality of pulp wanted for certain purposes by the paper mill, must be strictly followed out, if he wishes to avoid troubles. Adhering strictly to this schedule, the production will be in proportion to the yield, and therefore it is not the mill superintendent that determines the production of the mill, but the purchasing agent—the man who buys the wood.

Influence of Pulp Yield on the Cost

We must also consider that it takes about the same amount of steam, sulphur, lime or limerock and labor to cook a digester containing the lower yielding wood as it does to cook the wood from which the greater yield is obtained. The labor cost per day throughout the pulp mill remains the same regardless of the yield per cord, but the labor cost per ton varies in direct proportion to the yield per cord.

Let us look at it from a different angle.

Assuming that a mill of a certain size is breaking even after having worked out a cooking schedule which satisfies the paper mill and can or does make 100 tons of sulphite per day when using black spruce only. The wood cost at $20 per cord of rossed wood would then be $3,020 per day, and any less production, on account of using balsam in whatever proportion, should be reckoned against the wood cost only. In other words, if this pulp mill is getting $50 per ton of sulphite f. o. b. mill it is receiving $5,000 per day. Then if pulpwood is brought in containing some of this 60 per cent white spruce and 40 per cent balsam fir, and the production drops off 19 per cent which leaves us only 81 tons daily production, there is going to be a decrease of $950 for each day that this kind of wood is used which should be deducted from the purchase price of the wood. This would then make the price not $16.77 as previously mentioned but really $13.70 per cord. If all sap peeled balsam fir should be used with a still further drop in yield, then only 69 tons would be the daily production with a decrease of $1,550. If charged against the wood cost this would mean that a cord of sap peeled balsam fir would be worth $9.73 per cord, as compared with $20 for black spruce.

I am afraid that many will not agree with me on the foregoing and I should perhaps add that the black spruce in mind contained very few knots, while all the wood other than black spruce contained more knots throughout. The sap peeled fir was especially bad in this respect.

Pulp Yield Should Govern Price of Wood

My advice to the manager and purchasing agent used to be that when purchasing wood, they should arrange to deduct 8 cents per cord for each per cent of balsam fir contained in wood purchased. This of course usually meant, should any offerings of fifty-fifty be made and the purchasing agent stick to his price, that we bought very little balsam. Taking the same $20 price as a base figure for black spruce it is now my belief that 10 cents should be deducted for every per cent of balsam fir contained in a cord of wood.

*Delivered at the annual convention of the American Pulp and Paper Mill Superintendents' Association, Niagara Falls, N. Y., June 5, 1925.

[1] Member TAPPI.

American Writing to Issue More Certificates

[From our regular correspondent.]

Holyoke, June 9, 1925.—The United States District Court at Boston, Saturday, announced that it would grant a supplementary decree allowing Sidney L. Willson receiver and President of the American Writing Paper Company to issue receiver's certificates to the amount of $375,000 thus providing means to pay off the tax indebtedness of the company. Arrangements will be made at once to secure the money from banks for the payment of the taxes about $340,000 being owed the city of Holyoke.

The city of Holyoke a few days ago filed an intervening petition for right to sell some of the property of the company in order that the taxes due might be liquidated. By agreement of counsel no date was asked for a hearing on the petition in order that the attorneys of the writing paper company might perfect their petition for permission to issue receivers certificates.

The city of Holyoke will not immediately withdraw its suit but as soon as the taxes are paid will ask that it be withdrawn. Payment of the two years' back taxes with interest has been a matter of negotiation for several months. In two months more the 1925 taxes of about $200,000 will be also due.

Receiver Sidney L. Willson filed the petitions through his Boston attorneys. Plans for reorganization are still incomplete.

Technical Section, Page 229

Recording Instruments for Paper Manufacture*

By Tom Harvey[1], Gardner & Harvey Co., Middletown, Ohio.

At last year's meeting of the Superintendent's Association held at Dayton, O., there was a controversy on the value of technically educated college men in our plants, and after considerable discussion I advanced the idea that the technically educated man could help the industry a great deal by perfecting instruments that would give definite results where we are now guessing. Mr. Davis, our President, said he thought this would make a good paper for our next meeting, and he appointed me to write a paper on this subject.

A great many of our troubles would be eliminated if the customer and the manufacturer could understand each other better. The customer in ordering paper should specify just what his requirements are, but in our line (paperboard)—and I suppose it is the same in all other lines of paper—we so often get an order from a customer who really does not know what tests his paper should be put to so that it will best serve his purpose, and very often if the mill could get the proper information, a lot of costly mistakes could be eliminated.

The Finish

There is one thing on which I think all mills are working in the dark, and that is the matter of finish. The customer generally sends a sample with his order stating he wishes the sample matched for weight, color and finish. Now we can determine the weight with our scales, and with an Ives Tintometer or a Lovibond instrument we get some assistance in matching the color, but as yet I have to see an instrument that will record the finish of a sheet of paper.

There has recently been put on the market the Ingersoll Glarimeter with the use of which I am not familiar, but it does not as far as I know, give a record of the finish.

An instrument of any kind that will register the finish, and give us a record that will do away with the human factor, would be a very valuable instrument.

The Moisture Content

We all know that the moisture content has very much to do with the finish of the paper, and yet we have no instrument that will record the moisture content of paper as it leaves the driers. I know we can take samples and get the percentage of moisture, and that is a help to some extent, but we should have a continuous record of the moisture content of the paper made automatically.

The Thickness

All makers of heavy papers have trouble keeping the caliper or thickness of their product uniform. We know that in running tissue paper the weight will sometimes run for days without touching the regulator at the stuff box, but the heavier the paper and the slower the machine runs, the more difficulty we have keeping the weight uniform.

Just recently there has been performed a micrometer, which, installed at the wet end of the machine, automatically regulates the stuff at the stuff box and keeps the paper at the desired thickness. It also keeps the machine tender posted by a system of red, white and blue lights as to just how his paper is running as to thickness.

Great Assistance to the Industry

In my opinion, perfecting instruments of this kind is one of the things to which the technically educated man could apply his knowledge that would be of great assistance to the industry. With his knowledge of mechanics he should be able, after becoming acquainted with the industry to see that the instruments we are now using are very unsatisfactory, and he should be able to benefit the industry at large by perfecting those we are now using, and develop some new instruments to give us results that are now unthought of, so that our customers in ordering paper could specify every detail required so that it will work satisfactory to them, and in using these instruments the mill would be able to keep its product more uniform.

I thing a superintendent should be able, on arriving at his office in the morning, to tell from charts on his desk, every detail as to how the mill had run in the past twenty-four hours. We have instruments that will check up our power plant so that we can tell just how much steam each boiler is making, and can figure how much it is costing us to make this steam.

I thing we should be able to check up our paper machines in the same way. We should be able to tell from records whether our paper ran uniform to weight, and also be able to see if the paper had the same moisture content, sizing, finish, etc., from these records.

*Delivered at the Annual Convention of the American Pulp and Paper Mill Superintendents' Association, Niagara Falls, June 5, 1925.

[1] Member TAPPI.

TAPPI Committees

Since the Annual Meeting in February there have been thirty-nine added to the membership of the Technical Association, made up of thirty-two individual members and seven Corporate Members. The eminently practical character of the activities of the committees, as well as the value of the service rendered by the Association to members, are both important factors in this increase.

The newly selected committees, with their chairmen, are as follows:

Abstracts and Bibliography: C. J. West, Chairman, M. L. Caust, A. Papineau-Couture, J. L. Parsons.

Cellulose: W. E. Baker, Chairman, P. K. Baird, R. T. Baldwin, T. C. Bentzen, J. E. Minor, J. L. Parsons.

Coated and Processed Papers: D. V. Lowe, Chairman, Norman Clark, J. H. Hazelwood, C. L. Lufkin, B. K. Steadman.

Drying of Paper: W. N. Baker, Chairman, R. L. Bosworth, A. B. Hansen, J. O. Ross, S. A. Staege, E. F. Troop, E. B. Wardle.

Dyestuffs: C. C. Schneider, Chairman, R. T. Baldwin, H. H. Harrison, J. R. Roberts, B. K. Steadman, R. A. Wilkins.

Heat, Light and Power: R. W. Leeper, Chairman, E. R. Comee, A. G. Darling, P. H. Glatfelter, S. A. Staege, H. S. Taylor.

Mechanical Pulp: W. E. Brawn, Chairman, C. K. Andrews, J. A. Limpert, E. R. Low, A. F. Meyer, Justin Warburton.

Paper Testing: B. W. Scribner, Chairman, E. A. Bergholtz, O. W. Callighan, Max Cline, H. U. Kiely, H. N. Lee.

Sulphate Pulp: R. M. Radsch, Chairman, A. H. Dumaree, G. F. Enderlein, H. L. Joachim, A. Y. Meeker, H. A. Morrison, R. H. Stevens.

Sulphite Pulp: B. S. Summers, Chairman; R. N. Miller, Vice Chairman; D. E. Cable, G. P. Genberg, A. H. Lundberg, Wilhelm Mattsson, J. E. O'Connell.

Standard Methods of Testing Materials: M. A. Krimmel, Chairman, H. E. Brakewood, O. L. Cook, A. H. Dumaree, E. J. Johnstone, L. E. Longstreth, R. G. Macdonald, J. E. Minor, G. L. Schadt, R. H. Stevens.

Soda Pulp: W. S. McClellan, Chairman, D. E. Cable, M. L. Griffin, C. S. Hamm, W. H. Howell, Jr, R. G. Macdonald, H. A. Morrison, J. J. O'Connor, G. M. Trostel.

Evaporator Test Code Sub-Committee: Ralph Mair, J. E. Plumstead, C. L. Wagner.

Training in the Industry: M. L. Griffin, Chairman, R. T. Haslam, C. E. Libby, J. O. Mason, J. A. Moyer, H. F. Obermanns, L. M. Yoerg.

Waste in the Industry: G. D. Bearce, Chairman; J. D. Rue, Vice Chairman; A. F. Allen, O. L. Berger, V. E. Fishburn, P. H. Glatfelter, H. O. Keay, R. H. McKee, G. R. Wyman.

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Conducted by THOS. J. BURKE, C.A., Sec-Treas

Administrative and Selling Costs, Their Nature and Distribution*

By W. H. Higginbotham, F.C.W.A. and Andrew Stewart, C.A.

Although an exact line of demarcation cannot be drawn, we may consider our subject matter as divisible, roughly, into two classes:—

1—Administrative costs or expense,

2—Selling and distribution expense,

recognizing meanwhile that the latter class will, in general, contain an element of the former.

In common usage the words "Administration" and "Organization" are employed somewhat ambiguously, and as synonymous terms. Strictly speaking, the former denotes management, government, direction, service, the conduct of office or employment, whereas the latter implies the process of forming an organism, capable of the performance of predetermined purposes or functions, and composed of organs or instruments of perception, expression, and action. The work of organization is constructive and finite: the purpose of administration is conservative and continuing, and appears to involve the pre-existence of something which is to be served, managed, directed, or governed. We may observe that both processes or functions are operative, however crudely, in all cases of collective human effort or existence; that both are the acts of indiivduals; and that both imply, in such cases, a subordination of the many to the purpose of the few. I suggest, therefore, that the process of organization in human affairs should be regarded as that of grouping individuals, in such manner as to form a recognizable entity; whereas the function of administration is the control, direction and service of the endeavors of those individuals in the furtherance and accomplishment of a common purpose.

Our present concern is with administration and organization in the economic sense—as applied to industry and its operations. In economics, organization (by which term we may understand also administration) is postulated as the fourth factor in the process of production; as the function of the employer, whereby land (or natural resources), labor and capital are co-ordinated in a common service. We may now state that function, therefore, as comprising, under the heading of:—

Organization,

1—The formulation of a productive purpose or plan,

2—The supply of installation and equipment, and of materials of production in accordance with that plan,

3—The combination of *personnel* as a complete producing unit, whereof the parts shall act in co-ordination, employing the equipment and materials supplied in pursuance of the general purpose. and under the heading of:—

Administration,

1—The maintenance, substitution, or modification of the productive plan,

2—The maintenance and replacement of installation and equipment; and the continued supply of materials of manufacture and operation,

3—The maintenance of the human organism itself, and the service, control, and direction, of its actions in accordance with the general purpose, as originally conceived or as modified or substituted.

Such I conceive to be the function of administration in industry; essentially personal, and inherently one of co-operation and service; and as such it is conceived in the great organization whose destinies are so ably controlled by the President of our Institute—and in which I have the honor to serve.

In attempting to typify the form and mode of action of the productive organism, I can offer no better or more appropriate illustration than the human body itself—admittedly the most perfect example of organization; capable, as it is, of maintaining its varied activities under the most diverse (and adverse) conditions of existence.

Accepting the analogy, we may now consider the purpose of the purpose of the producing organism, its component units, their functions, and the duties of its administrative officers. In so doing, and with your permission, I shall discard the titles ordinarily used, substituting therefor the nomenclature of the public services, with such titles as Controller, Director, Section Director, and Executive Officer. The first three will represent a department of administrative activity, or point of control, the expense in relation to which will require to be ascertained periodically. For this purpose, the area of control will be indicated numerically as: 1000, 2000, etc.—Controllers; 1100, 2100, etc.—Directors; 1110, 2110, etc.—Section Directors (these being described as "Location Numbers"). The method is familiar to all users of tabulating machinery as an adaptation of the "Dewey" decimal system of classification. I propose also to accept the conventional distinction (as regards cost of labor) between: (1) Operation or action, as comprising manual operations in relation to plant or product; (2) Administration, as com-

*From the Cost Accountant.

prising all other and non-manual activities. Foremen, and those performing a controlling function in direct contact with producing or service units will be termed executive, and their remuneration separately classified.

We may now distinguish groups of functions and their control. My conception of the various groups and controls is somewhat as follows:—

(A) CONTROLLER OF DESIGN AND EXPERIMENT, directing activities, for example, of separate Directors of Materials, Process and Product, Research Experiment and Design.

(B) CONTROLLER OF PLANNING AND PERFORMANCE, responsible for conception and obtaining performance of complete output programme, to comply with the requirements of the Controller of Selling and Distribution, assisted by Directors, as follows:—

(1) ESTIMATING AND COSTS STANDARDS. Director controlling Section Directors attached to each Operating or Service Division (other than Labor and Storage.)

(2) SPECIFICATIONS AND STANDARDS. Director reponsible for the provision of full formulæ process schedules, specifications, drawings, etc.

(3) ORDERS AND REQUISITIONS. Director responsible for preparation and issue of raw material schedules to Buyers, component delivery schedules to Works (showing quantities, dates, etc.), and issue of formal orders to Works and to Purchasing Officers.

(4) PRODUCT CONTROL AND EFFICIENCY. Director responsible for arrival of raw material, comparison of issue quantities with standards, and maintenance of progress and deliveries by works, assisted by section directors, either attached to productive divisions or to store.

(5) INSPECTION. Director responsible for maintaining quality of material and product attached to producing divisions or Stores depots or groups, assisted by section directors, etc.

(C) FACTORY OPERATION CONTROL. Comprising general control of Factory operations in accordance with Production Control plan. Carried out by Officers as follows:—

(1) STORAGE. Director, assisted by Section Director, controlling in Sectional Stores depots, inward and outward movements of materials and components in accordance with authorizations and maintaining records for accounting purposes.

(2) TRANSPORT. Director, assisted by Section Directors, dealing with different classes of transport and including the handling of incoming and outgoing goods, and all interdepartmental movements.

(3) POWER. Director, assisted by Section Directors, responsible for the generation and transmission of steam power and lighting as requisitioned by departments.

(4) INSTALLATION AND MAINTENANCE. Director, assisted by Section Directors, responsible for maintenance, upkeep and repair of installation generally. Subdivided as between Buildings (repairs, fire prevention, etc.), Plant and Tools (Process Plant, Tool-Room, etc.)

(5) LABOR. Director concerned with engagement, transferring and discharging of employees (on requisition from Production, Service and other Directors) from executive ranks downwards; for training, observance of factory regulations and statutory requirements. Assisted by Section Directors dealing with remuneration (such as rate fixers), welfare (as safety ambulance, dining rooms, etc.) safety, process, returns, etc. Executive officers rank as foremen.

(D) PRODUCTIVE OPERATING CONTROL. This group will be divided into Producing Divisions under Directors having separate location numbers (as 4100, 4200), and these similarly subdivided into process groups under Section Directors numbered, e.g., 4110, 4111. A producing division may be responsible for a complete product, or a series of stages only: process groups may comprise a "shop" (as a machine shop) or a process unit or number of like units. Thus Foundries would form a division: Iron, Steel and Brass Foundries "process groups." The general duties of Directors and Section Directors, as administrative officers, would comprise the supervision of operations, requisitioning for labor and services; maintaining flow of product of quality and in quantity demanded by Location No. 2310. Executive assistance would be given by foremen; other executives would be Inspectors, Job and Time Clerks, or Ratefixers, present for purposes of record and inspection. General responsibility for discipline, care of plant, observance of factory and statutory regulations will be on Directors and Section Directors, who will also be required to maintain costs at a standard level previously fixed by section 2100 (Estimating and Cost standards).

(E) FINANCE CONTROL (including Purchasing and Records). Controlling all financial and recording activities (in so far as they represent money values), assets and liabilities, income and expenditure; including the making of budgets or financial forecasts and the later comparison of actual results therewith. Operated by Directors and Section Directors, as under:—

1—PURCHASING DIRECTOR, assisted if necessary by Section Directors for different classes of material. Responsible for knowledge of markets and for making and performance of contracts for materials of quality and types, and at dates, as fixed by schedules provided by Location 2310 in accordance with approved programme of production and expenditure. Operating materials will be purchased in accordance with approved programme.

2—FINANCIAL AND COMMERCIAL RECORDS. Director responsible for maintenance of records, financial accounts and statements, and budget statements; and reporting comparisons therewith. Section Directors as follows: IMPERSONAL ACCOUNTS. (a) Loans and Capital Accounts. (b) Income and Expenditure. CASH AND CREDITS. (a) Receipts. (b) Disbursements. DEBTORS' ACCOUNTS. Sales in groups. CREDITORS' ACCOUNTS.

3—FACTORY ACCOUNTS AND RECORDS. Director responsible for maintenance of records, factory accounts and expenditure statements, process and product cost statements and comparisons, budget statements, and reporting divergencies therefrom. Assisted by Section Directors dealing with: (a) DISBURSEMENTS (other than wages) in detail. (b) MATERIALS AND STORES RECORD: in detail. (c) DIVISIONAL OPERATING RECORDS, prefixing signficant numbers attached to Operating Divisions and maintaining divisional operating and production cost accounts and ledgers; preparing final costs and divisional accounts. (d) WAGES AND TIME. Pay Roll preparation, State Insurance records, wages payment, general timekeeping. (e) CONTROLLING ACCOUNTS. Records of inventory, inventory, installation values and fixed charges; Controlling Accounts for stock disbursements, overhead distribution and production and production costs, recoveries and credits for services and product delivered, in parallel with Divisional records. Final Works Accounts and Balance Sheet.

(F) CONTROL OF ADMINISTRATIVE OPERATIONS comprising: (1) DIRECTOR OF PERSONAL RELATIONS (with Section Directors for (a) administrative staff records, (b) office management and regulations, etc. (2) Legal and Correspondence Director with Section Directors as Registrar; Correspondence, etc.

(G) SELLING AND DISTRIBUTION CONTROL. Under this heading will be comprised all activities relating to selling and distribution of product, which will be the subject of separate treatment. The method of accounting for expense on the basis here outlined, though at first sight somewhat involved, is not really so in practice. Fundamental principles are: (1) That every "Director" shall budget in advance for the amount of administrative expense anticipated over a period; (2) That no charge shall be made to any location unless previously authorized or agreed to by the Section Director responsible, or by his superior. Consistently with this, standard of cost of product or service unit, or of process time and cost, are predetermined, and form the basis of recovery or charging out for product or services rendered by any operating section. Any surplus or deficit marks resulting in improvement or falling off in cost efficiency, which appears in the final monthly accounts to be accounted for—both for individual locations and for the fac-

tory as a whole—finished product being charged to the selling and distributing control at a predetermined total cost. For the past seven years I have been convinced that this method is essential to control.

Collection and allocation of expense is made by accounts grouped as follows:

NUMBERS 1 TO 10—RAW MATERIAL STOCKS. In groups, there being a detailed code of commodities underlying these, where tabulating machines are utilized. Groups indicate types of material, and not situation in store.

NUMBERS 21 TO 30—FINISHED PRODUCT ACCOUNTS. In groups. Detail numbers (as subdivision of the account number) are used to indicate types, sizes, etc.

NUMBERS 31 TO 40—SPECIAL ORDER AND PRODUCTION ACCOUNTS. Controlling work in process of all types, in groups; may be found in any operating or service division; and are credited by transfer of finished cost to Nos. 21/30, or to Expense Accounts. Detail or subsidiary numbers indicate special order number—as—31/124.

NUMBERS 41 TO 50—INSTALLATION CAPITAL VALUES, as 41, Buildings; 42, Roads and Railways; 43, Fixed Plant; 44, Rolling stock and transportation equipment; 45, Power transmission; 46, Loose tools and equipment; 47; Portable process plant; 48, Patterns, dies, blocks, etc.; 49, Fixtures and fittings; 50, Office furniture.

NUMBERS 51 TO 60—MAINTENANCE EXPENDITURES as in previous group.

NUMBERS 61 TO 100—OPERATING CHARGES GENERALLY.

NUMBERS 61 TO 64—FIXED CHARGES; Rent, Rates, Taxes, Sch.; 62, Insurance (Fire-Boiler); 63, Depreciation; 64, Interest.

NUMBERS 65 TO 79—CURRENT EXPENSES: 65, Gas, Water, Power and Light (purchased); 66, Carriage (inward); 67, Outward Carriages, Freight, Shipping Expenses and Insurance; 68, Postal services and charges; 69, Miscellaneous expenditures; 70, Stores and Supplies (debited from Materials issues); 71, Wages 72, Salaries (Classified by abstracts of Pay Rolls, etc., as, production process direct or indirect, executive, administrative); 73, Commission; 74, Travelling expenses; 75, Professional fees and charges; 76, Insurance (State and Workmen's Compensation); 77, Patent Fees and Royalties; 78, Advertising and Publicity; 79, Trade Subscriptions and Donations.

NUMBERS 80 TO 90—MISCELLANEOUS ACCOUNTS (COMMERCIAL): 81, Interest (trade); 82, Discounts; 83, Bad Debts; 88, Scrap and Spoilage; 89, Direct Cost Charges.

NUMBERS 91 TO 100—SERVICE ACCOUNTS: 91, Buildings and Space; 92, Plant and Installation; 93, Materials Service; 94, Transport; 95, Power and Transmission; 96, Labor; 97, Maintenance; 98, Operating Expense; 99, Administrative Expense; 100, Selling and Distribution.

These account numbers are used in conjunction with Location Numbers thus: 4011/74 represents Travelling Expenses; Foundry Manager; 4011/630 the same, in relation to a Work Order (No. 630); or 4011/89/630 Travelling Expenses treated as a direct cost charge to the Foundry against Work Order 630.

Alternatives and extensions will readily occur to you; the method outlined is but one of many; for example, the Location Number in the last instance may be replaced by a significant number indicating the process group controlled.

The accounting procedure of collection is, briefly, as follows:—

1—Controlling Accounts govern the whole of the Divisional Cost accounting records; and are kept in similar form.

2—Accounts (loose leaf, tabular form) are kept divisionally for each Location (administrative or operative) with headings as under (a) FIXED CHARGES—(1) Buildings, (2) Installation. (b) CURRENT OPERATING EXPENSE—(1) Wages (other than charged to Works Orders or Maintenance A/cs.); (2) Salaries: (a) Executive, (b) Administrative; (3) Stores and Supplies; (4) Current Expenses. (c) REPAIRS AND MAINTENANCE. (d) SERVICE CHARGES—(1) Transport; (2) Power; (3) Labor, (4) Administrative.

These columns represent charges more or less common to all classes or operation. On the credit side of the account there appears a column for amounts recovered by charge to other locations or to production, special or standing maintenance orders. Locations performing producing or service operations involving special, standing maintenance or production orders have a further form of record showing, as debits: (a) MATERIALS (as issued and credited on A/cs. 1 to 10. (b) WAGES (1) Direct (from Account No. 71); (2) Indirect (from Account No. 71.) (As summarized from Time Records, etc.). (c) DIRECT COST CHARGES (as recorded against A/c. No. 89). (d) TRANSFERS (affecting account Nos. 31 to 40 and 51 to 60.) (e) BURDEN. Representing amounts figured at predetermined rates per man-process or process unit hour, or per unit of product at process (whichever may be applicable) credited to the individual Location accounts separately as a recovery; and in total credited to Operating Expense Account and charged to the appropriate order account (as above).

Credits are shown for (a) Value of finished product delivered (at predetermined cost rates) to stores (A/cs. Nos. 21/30); of units of service (power, etc.) delivered (at predetermined rates) and of maintenance orders completed. In these latter instances the credit here will be a charge to the respective service Accounts (93, 94, 95, etc.) in control which will be credited by charge to the Locations receiving the service. (b) Value of intermediate product transfers. (Credits and debits alike on A/cs. 31/40.) These may be made at fixed values, or at cost; or (as in Engineering) no credit may be made until completed as a job.

On both sides of the Accounts appear columns for scrap and spoilage, the credit representing the full value transferred to A/c. No. 88, the difference after deduction of scrap value being recharged to the Location on the appropriate account number (31/40).

Locations operating expenses are charged as follows:—

1—FIXED CHARGES—Building and Space; Plant and Installation. By credit to Buildings and Plant Service A/c. Nos. 91 and 92, on predetermined rates, based on floor space occupied, or plant values held as shown by inventory respectively. The Service Accounts are debited by closing A/cs. 61/64 in total. Administrative Locations may or may not be charged for office space, but it is suggested that they should be.

2—CURRENT OPERATING EXPENSES.

1—WAGES: (where not charged to special or other orders) by crediting A/c. No. 71 and debiting Operating Expense Account in total; Locations in detail.

2—SALARIES: Similarly—crediting A/c. No. 72.

3—STORES AND SUPPLIES: By credit to A/c. No. 70 (previosly debited from Materials A/c. 1/10) in total and debit Operating Expense, Locations in detail from Stores issues records.

4—CURRENT EXPENSES: A/cs. 65 to 69, 76 to 79, as affected, credited and total debited to Operating Expenses A/c. No. 98 details being charged to Locations from original documents, abstracts, etc.

3—MAINTENANCE—Special and standing maintenance order charges, as credited to the Location Cost Accounts controlling them, are: (1) Credited in total on A/cs. Nos. 51/60. (2) Debited in total to Maintenance Service A/c. No. 97. This latter account is credited in turn with the amounts debited in detail to Locations chargeable, Operating Expense Account being debited in total.

4—SERVICE CHARGES.

(1) MATERIALS SERVICE. Although not shown as an expense of operation, it is included in cost. Materials Service Account is charged with the Operating Expenses of all locations concerned with supply or storage of materials, and credit is given by adding to the value of each issue of material a predetermined percentage, the total amount being credited to this account. In summarizing material issues this addition is totalled separately, but is debited as part of Material Cost. The Locations of which the Operating Expense is so included are the material sections of Product Control Group (24) of Inspection Group (25), all of Group (31) and

Group (51) Purchasing; also Group 5320 (materials and stores records. (51) Purchasing; also Group 5320 (materials and stores records). In addition, inward carriage account will be charged to this account from account No. 66, as allocated to materials. In transferring Operating Expense of Locations the total will be credited to Operating Expense Account.

(2) and (3) TRANSPORT AND POWER. By charge from Operating Accounts of Transport (Group 32), and Power (Group 33) Locations (crediting their Operating Expense in detail, and Operating Expense Account in total), for the number of units of service supplied (as measured or computed) at predetermined rates. Installation and Maintenance (Group 34) is dealt with by transfer of the charges for repairs, etc., as previously explained.

(4) LABOR. Absorbs Operating Expense of Locations 5330 (Time and Wages) and Labor Group (3500). They are credited in detail, and Operating Expense Account in total; thereafter charges are made to Operating Service locations at a fixed rate per man-hour on all labor hours employed, the total amount being credited to Labor Service Account.

There remains now to deal only with Administrative Service Expenses. Within each "control group" the expense of the Controller's location will be distributed over the remainder (e.g., pro rata to personnel); next, the expense of the Directors' Locations over their subsidiary Locations either as a fixed sum per head, or rate per man-hour on hours employed in the Division, or otherwise as equitable. Credits and debits will be made accordingly. Thereafter, all remaining administrative locations (other than those controlling producing or service divisions) will be credited with their total expense. Operating Expense Account being credited in total and Administrative Service Account debited. Simultaneously a credit will be made on Administrative Service Account, and a debit in total on Operating Expense Account (with debits in detail to all producing and Service Locations) at a fixed rate per man-hour for all men employed (productive, direct or indirect). Any balance then remaining will go forward as surplus or deficit to next period.

We have now remaining only those locations concerned with Product, Process or Service (power, transport, maintenance and storage). Against all these, and against the Operating Expense Account (No. 98) in total, credits have already been given by debit in detail and total to Production, Standing Maintenance or Special Orders Accounts (Nos. 31/40-51/60) and, through the Service Accounts 93 to 97 back to Operating Expense of other locations, at fixed rates of burden charge. Any balance on Operating Expense Account in total is reconcilable with similar balances (surplus or deficit) appearing at each location, and will be carried forward to the next accounting period.

It will be observed that distribution is always made, if possible, at "predetermined rates," and on hours (man process, process unit (or machine), hours, etc.) Distribution as a percentage of labor cost is too erratic for consideration. Estimating and budgeting alike are based on this principle of predetermination, and I suggest that in the distribution of overhead (administrative or other) it is undoubtedly the best method to adopt.

Consideration of the remainder of our subject ("Selling and Distributive Costs") must of necessity be brief; but, in any case, brevity will be facilitated since the accounting methods and control will be as already explained, the Location Numbers falling within the "Control Group" 7000. Our range of account numbers will require extension, but as this will be inevitable, from the standpoint of the financial accounting, in order to provide for certain other purely commercial and financial aspects, no difficulty will arise. Nor will confusion occur in allocation of expense, this being governed by Location Numbers primarily. We may therefore assign account numbers 101 to 110 for sales of groups of product—in parallel with the "finished stock accounts," 110 to 120 for Special Order costs also in parallel; 121 for Advertising Material Stocks. From an accounting standpoint we have to consider, in relation to sales: (1) Type or product—subdivided into size, horse power, etc.; (2) Market area—home, foreign, subdivision into territories; these divisions giving the distribution efficiency factor. We have next to consider the unit of sales—which may be quantitive, but which usually can only be expressed in terms of money—"dollars of sales." Finally, we have to consider methods of (a) SELLING, including the arousing of interest, personal contact with customers, and all that comprises the *Making* of the contract; (b) DISTRIBUTION, including transport, warehousing and storage, and actual delivery or *performance* of contract. Accounting for sales and book debts will remain a financial function, though in part carried out under the control of the Selling organization. We have therefore to endeavor to ascertain the costs of (a) SELLING; (b) DISTRIBUTION; in relation to (1) A number of units of quantity, or value, of (2) product of any particular type, in (3) any given area or market. Analysis of sales accounts (invoices in detail summarized and tabulated) will give (1), (2) and (3). Costs of Selling and Distribution will be arrived at under the accounting system already laid down. Though I have great admiration for the work of the salesmen, it must be admited (in the cold, hard light of economics) that his operations are those of an individual, directed by other individuals, in performance of certain definite functions. These functions again, for control purposes, must be grouped; and this grouping will depend on the area of operations and the nature of the product. We will assume both home and foreign sales with branch offices, agents, stores or depots; but excluding the operation of retail shops in addition. We may therefore have an organization somewhat as follows:—

CONTROLLER OF SELLING AND DISTRIBUTION assisted by: *Assistant Controllers.* 1—Home, 2—Foreign, 3—Distribution; *Director* of Publicity and Advertising.

ASSISTANT CONTROLLERS' functions are arranged as under:

1—HOME. Assistant Controller with:

(a) TENDERS AND ESTIMATING DIRECTOR assisted by Section Directors dealing with Product groups.

(b) DIRECTOR OF SALESMEN AND AGENTS assisted by Section Directors controlling divisions which may represent either Territories or Product groups—according to the Selling plan and methods.

(c) DIRECTOR OF BRANCHES assisted by Section Directors controlling the Branches themselves (as Branch Managers) or being concerned at Head Office with the operations of certain Branches.

2—FOREIGN. Organized similarly.

3—DISTRIBUTION.

(a) STORAGE AND WAREHOUSING: Assistant Controller with Director assisted by Section Directors in charge of separate stores or depots. These may be regarded as serving a particular territory, or as handling a product group, according to the facts.

(b) TRANSPORT: Director with Section Directors for (1) Inland Transport and (2) Marine and Foreign Transport.

In these instances distribution will be made over product, quantity handled, or special order in suitable cases.

ADVERTISING.

The director of Advertising will formulate advertising schemes and plans (Home and Export) to be considered in conjunction with the Assistant Controllers and the Controller. Section Directors may be (1) Press Advertising; (2) Poster Advertising; (3) General Advertising, Catalogues, etc. They will have as assistants, artists, copywriters, publicity and circulation experts, etc. Advertising charges will be concerned chiefly with product groups either alone or in relation to area covered by advertising. Special advertising will also be covered by Special Orders, where necessary.

Co-ordination will be necessary as between all sections, and must be maintained particularly as between salesmen and branches (receiving orders) and transport and distribution (dispatching). Where (as in engineering) product is identifiable and is to be packed, packing will be done and charged against the special order

(*Continued on page* 69)

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JUNE 6, 1925

SUMMARY

News print	446 rolls
Printing paper	30 cs.
Wall paper	7 bls., 4 cs.
Wrapping paper	419 rolls, 23 cs.
Drawing paper	37 cs.
Cigarette paper	100 cs.
Writing paper	9 cs.
Paper hangings	39 bls.
Filter paper	151 bls., 5 cs.
Decalcomania paper	2 cs.
Metal paper	4 cs.
Baryta coated paper	117 cs.
Packing paper	10 bls.
Fancy Paper	9 cs.
Colored paper	5 cs.
Surface coated paper	135 cs.
Tissue paper	3 cs.
Duplex paper	3 cs.
Bowl paper	23 bls.
Cover paper	4 cs.
Wafer paper	5 cs.
Gold coated paper	2 cs.
Metal coated paper	1 cs.
Basic paper	40 cs.
Miscellaneous paper	161 cs., 353 bls., 607 rolls

CIGARETTE PAPER

P. J. Schweitzer, Pres. Monroe, Marseilles, 100 cs.

WALLPAPER

F. J. Emmerich & Co., Minnetonka, London 4 bls.

F. J. Emmerich & Co., Aquitania, London, 2 bls.

A. C. Dodman, Jr., Inc., Aquitania, Havre, 1 cs.

W. H. S. Lloyd & Co., Aquitania, Havre, 1 cs.

W. H. S. Lloyd & Co., Aquitania, Havre, 1 ble.

Thomas & Pierson, Aquitania, London, 2 cs.

PAPERHANGINGS

W. H. S. Lloyd & Co., Minneonka, London, 34 bls.

W. H. S. Lloyd & Co., Samaria, Liverpool, 5 bls.

NEWS PRINT

Maurice O'Meara Co., A. Ballin, Hamburg, 23 rolls.

Irving Bank Columbia Trust Co., A. Ballin, Hamburg, 423 rolls.

PRINTING PAPER

Japan Paper Co., Am. Merchant, London, 3 cs.

H. Reeve Angel & Co., Inc., Minnetonka, London, 1 cs.

B. F. Drakenfeld & Co., Baltic, Liverpool, 16 cs.

Commercial Cable Co., Samaria, Liverpool, 1 cs.

Martin & Bectold, S. Ventana, Bremen, 9 cs.

TISSUE PAPER

Meadows, Wye & Co., Samaria, Liverpool, 3 cs.

DUPLEX PAPER

O. Hommel & Co., S. Ventana, Bremen, 3 cs.

DECALCOMANIA PAPER

Phoenix Shipping Co., S. Ventana, Bremen, 2 cs.

WRAPPING PAPER

E. Dietzgen & Co., A. Ballin, Hamburg, 23 cs.

Chemical National Bank, A. Ballin, Hamburg, 23 cs.

Okonite Callender Cable Co., Minnetonka, London, 347 rolls.

PACKING PAPER

J. P. Heffernan Paper Co., Drottningholm, Gothenburg, 10 bls.

BOWL PAPER

C. A. Johnson Co., Samaria, Liverpool, 23 bls.

METAL PAPER

Hensel Bruckman & Lorbacher, A. Ballin, Hamburg, 4 cs.

COVER PAPER

International Forwarding Co., A. Ballin, Hamburg, 4 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 5 cs.

J. Manheimer, Homeric, Bordeaux, 151 bls.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 5 cs.

Titan Shipping Co., La Savoie, Havre, 20 cs.

Titan Shipping Co., Aquitania, Havre, 12 cs.

COLORED PAPER

Hensel Bruckman & Lorbacher, Veendam, Rotterdam, 5 cs.

WRITING PAPER

Guibout freres, Paris, Havre, 9 cs.

WAFER PAPER

Habicht Braun & Co., Veendam, Rotterdam, 5 cs.

BARYTA COATED PAPER

Globe Shipping Co., S. Ventana, Bremen, 67 cs.

Globe Shipping Co., Columbus, Bremen, 50 cs.

GOLD COATED PAPER

C. B. Richard & Co., S. Ventana, Bremen, 2 cs.

SURFACE COATED PAPER

Prager Co., Arabic, Hamburg, 30 cs.

P. C. Zuhlke, Lapland, Antwerp, 89 cs.

Gevaert Co. of America, Lapland, Antwerp, 14 cs.

P. C. Zuhlke, Veendam, Rotterdam, 2 cs.

METAL COATED PAPER

C. B. Richard & Co., Columbus, Bremen, 1 cs.

FANCY PAPER

Whiting & Patterson Co., Homeric, London, 6 cs.

Whiting & Paterson Co., Aquitania, London, 3 cs.

BASIC PAPER

Globe Shipping Co., Lapland, Antwerp, 40 cs.

PAPER

Gilbert Paper Co., Drottningholm, Gothenburg, 105 bls.

Gilbert Paper Co., Drottningholm, Gothenburg, 68 rolls.

Universal Paper Co., Drottningholm, Gothenburg, 4 rolls.

Universal Paper Co., Drottningholm, Gothenburg, 7 bls.

M. Walsh, Inc., Drottningholm, Gothenburg, 27 rolls.

Crepe Kraft Co., Inc., Drottningholm, Gothenburg, 60 rolls.

M. M. Cohen, Drottningholm, Gothenburg, 48 rolls.

M. M. Cohen, Drottningholm, Gothenburg, 95 bls.

T. Barrett & Son, Drottningholm, Gothenburg, 117 bls.

Irving Bank Columbia Trust Co., Drottningholm, Gothenburg, 390 rolls.

Irving Bank Columbia Trust Co., Drottningholm, Gothenburg, 29 bls.

E. H. Sergeant & Co., Drottningholm, Gothenburg, 2 cs.

Judson Freight Forwarding Co., Paris, Havre, 12 cs.

A. J. Woodruff, Paris, Havre, 2 cs.

Perry Ryer & Co., Assyria, Glasgow, 125 cs.

Roneo, London Exchange, London, 10 rolls.

Japan Paper Co., C. Rosso, Genoa, 9 cs.

Steiner Paper Corp., Veendam, Rotterdam, 11 cs.

RAGS, BAGGINGS, ETC.

New York Trust Co., A. Merchant, London, 240 bls. rags.

American Woolstock Corp., A. Ballin, Hamburg, 3 bls. rags.

Albion Trading Co., A. Ballin, Hamburg, 1 ble. rags.

E. J. Keller Co., Inc., A. Ballin, Hamburg, 101 bls. rags.

Salomon Bros. & Co., A. Ballin, Hamburg, 11 bls. rags.

S. Silberman, A. Ballin, Hamburg, 48 bls. rags.

The Stone Bros. Co., Inc., La Savoie, Havre, 221 bls. rags.

E. J. Keller Co., Inc., La Savoie, Havre, 20 bls. rags.

National City Bank, La Savoie, Havre, 50 bls. rags.

W. Barnet & Son, Samaria, Liverpool, 78 bls. rags.

Castle & Overton, Inc., Samaria, Liverpool, 133 bls. rags.

Brown Bros. & Co., Assyria, Glasgow, 145 bls, rags.

Hughes Fawcett, Assyria, Glasgow, 16 bls. flax-waste.

W. Schall & Co., Francisco, Newcastle, 125 bls. rags.

Baring Bros. & Co., Francisco, Antwerp, 45 bls. threadwaste.

Royal Manufacturing Co., Francisco, Antwerp, 54 bls. threadwaste.

Anglo South American Trust Co., Francisco, Antwerp, 104 bls. cardwaste.

E. J. Keller Co., Inc., S. Ventana, Bremen, 64 bls. rags.

Brown Bros. & Co., S. Ventana, Bremen, 39 bls. rags.

Bankers Trust Co., S. Ventana, Bremen, 40 bls. rags.

A. W. Fenton, Inc., Arabic, Hamburg, 573 bls. rags.

E. J. Keller Co., Inc., Arabic, Hamburg, 359 bls. rags.

A. W. Fenton, Inc., L. Exchange, London, 265 bls. rags.

National City Bank, L. Exchange, London, 100 bls. rags.

National City Bank, L. Exchange, London, 86 bls. bagging.

E. J. Keller Co., Inc., Masaniello, Marseilles, 230 bls. rags.

Equitable Trust Co., G. Mamele, Genoa, 33 bls. rags.

A. W. Fenton, Inc., G. Mamele, Genoa, 130 bls. rags.

Anglo South American Trust Co., G. Mamele, Genoa, 57 bls. rags.

International Acceptance Bank, G. Mamele, Genoa, 70 bls. rags.

International Acceptance Bank, G. Mamele, Naples, 108 bls. rags.

Amsinck Sonne & Co., Inc., Asia, Marseilles, 90 bls. rags.

Fidelity Intl. Trust Co., Asia, Marseilles, 60 bls. rags.

Bankers Trust Co., Karachi Maru, Hamburg, 149 bls. rags.

W. Steck & Co., Veendam, Rottendam, 115 bls. bagging.

E. J. Keller Co., Inc., Veendam, Rotterdam, 209 bls. rags.

E. J. Keller Co., Inc., Veendam, Rotterdam, 45 bls. bagging.

Chemical National Bank, Veendam, Rotterdam, 58 bls. rags.

S. Birkenstein & Sons, Veendam, Rotterdam, 45 bls. rags.

Katzenstein & Keene, Inc., Veendam, Rotterdam, 31 bls. rags.

The Stone Bros. Co., Inc., Veendam, Rotterdam, 17 bls. rags.

E. J. Keller Co., Inc., Ryndam, Rotterdam, 115 bls. rags.

E. J. Keller Co., Inc., Clara Venice, 397 bls. rags.

E. J. Keller Co., Inc., Clara Venice, 39 bls. bagging.

E. J. Keller Co., Inc., Scotland Maru, Venice, 45 bls. rags.

E. J. Keller Co., Inc., Scotland Maru, Venice, 100 bls. rags.

E. J. Keller Co., Inc., Mexican, Kobe, 600 bls. rags.

E. J. Keller Co., Inc., Isonzo II, Genoa, 155 bls. rags.

E. J. Keller Co., Inc., Zeeland, Antwerp, 176 bls. flaxwaste.

(Continued on page 68)

Imports of Paper and Paper Stock

(*Continued from page 67*)

OLD ROPE

Brown Bros. & Co., A. Ballin, Hamburg, 72 coils.
Brown Bros. & Co., Stavangerfjord, Oslo, 37 coils.
Darden Beller Co., Monterey, Havana, 8 bls.
Brown Bros. & Co., Francisco, Newcastle, 199 coils.
New York Trust Co., Francisco, Newcastle, 68 coils.
Brown Bros. & Co., Francisco, Hull, 23 bls.
Brown Bros. & Co., Francisco, Hull, 93 coils.
Ellermans' Wilson Line, Francisco, Hull, 48 bls.
Ellermans' Wilson Line, Francisco, Hull, 45 coils.
W. Steck & Co., Arabic, Hamburg, 29 bls.
Brown Bros & Co., Lapland, Antwerp, 51 bls.
Brown Bros. & Co., Veendam, Rotterdam, 247 coils.
E. J. Keller Co., Inc., Masaniello, Barcelona, 42 bls.

WOODPULP

E. M. Sergeant & Co., Stavangerfjord, Oslo, 250 bls. chemical pulp.
Chemical National Bank, Stavangerfjord, Oslo, 300 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., Drottningholm, Gothenburg, 10 bls. woodpulp.
Price & Pierce, Ltd., Drottningholm, Gothenburg, 1800 rolls wet pulp.
Bulkley, Dunton & Co., Progress, 6350 bls. wood pulp.

WOODFLOUR

B. L. Soberski, Stavangerfjord, Fredrikstad, 750 bags, 51,000 kilos.

CHINA CLAY

J. W. Higman Co., Inc., Bauta Fowey, 507 tons 15 cwt.
Atlantic National Bank, Bauta Fowey, 1721 tons 9 cwt.

BOSTON IMPORTS

WEEK ENDING JUNE 6, 1925

J. H. Scott Paper Co., Karachi Maru, Hamburg, 91 rolls print paper.
N. Holz, Karachi Mauri, Hamburg, 4 cs paper.
Rasmill Fibre Co., Karachi Maru, Hamburg, 167 bls. pasteboards.
First National Bank of Boston, Caledonian, Manchester, 134 bls. cottonwaste.
J. B. Moors & Co., Caledonian, Manchester, 118 bags hidecuttings.
J. B. Moors & Co., Caledonian, Manchester, 213 bags hidecuttings.
T. D. Downing & Co., Caledonian, Manchester, 129 bls. rags.
Baring Bros. & Co., Ltd., Caledonian, Manchester, 101 bls. rags.
New England Waste Co., Caledonian, Manchester, 35 bls. rags.
R. F. Downing & Co., Caledonian, Manchester, 69 bls. newcuttings.
Brown Bros. & Co., Caledonian, Manchester, 44 bls. newcuttings.
Darmstadt Scott & Co., Caledonian, Manchester, 85 bls. new cuttings.
Goschens & Cunliffe, Caledonian, Manchester, 59 bls. rags.
National City Bank, Caledonian, Manchester, 50 bls. rags.
J. Cohen Son & Co., Inc., Caledonian, Manchester, 28 bls. rags.
First National Bank of Boston, Rhode Island, Liverpool, 110 bls. rags.
J. S. Moors & Co., Rhode Island, Liverpool, 26 bls. rags.
Linen Thread Co., Rhode Island, Liverpool, 88 bls. flaxwaste.
Hughes Fawcett, Rhode Island, Liverpool, 36 bls. flaxwaste.
Train Smith & Co., Capulin, Hull, 393 bls. paperstcck.
Merchants National Bank, Capulin, Hull, 83 bls. rags.
E. J. Keller Co., Inc., Blommersdyk, Rotterdam, 53 bls. rags.
E. Butterworth & Co., Inc., Blommersdyk, Rotterdam, 147 bls. rags.
T. D. Downing & Co., Blommersdyk, Rotterdam, 37 bls. rags.
G. M. Graves & Co., Blommersdyk, Roterdam, 6 bls. rags.
Castle & Overton, Inc., Novian, Manchester, 95 bls. wastepaper.
G. M. Graves & Co., Nevisian, Hamburg, 38 bls. rags.
E. Butterworth & Co., Inc., Nevisian, Antwerp, 138 bls. flaxwaste.
Spoulding Fiber Co., Nevisian, Antwerp, 487 bls. flaxwaste.
Brown Bros. & Co., Nevisian, Antwerp, 92 coils old rope.
J. C. Thallie & Co., Blommersdyk, Rotterdam, 65 bls. old rope.
J. Anderson & Co., Karachi Maru, Hamburg, 275 bls. woodpulp, 55 tons.
Hartig Pulp Co., Karachi Maru, Hamburg, 250 bls. woodpulp, 51 tons.

NEW ORLEANS IMPORTS

WEEK ENDING JUNE 6, 1925

Castle & Overton, Inc., Elmsport, France, 193 bls. rags.
Castle & Overton, Inc., Ogontz, Spain, 90 bls. bagging.

PHILADELPHIA IMPORTS

WEEK ENDING JUNE 6, 1925

Koons, Wilson & Co., Melyonian, Liverpool, 1 cs. photo paper.
E. J. Keller Co., Inc., Hornfels, Bremen, 31 bls. rags.
E. J. Keller Co., Inc., Legie, Hamburg, 318 bls. rags.
E. J. Keller Co., Inc., Mexican, Kobe, 700 bls. rags.
E. J. Keller Co., Inc., West Eldara, Rotterdam, 50 bls rags.
E. J. Keller Co., Inc., McKeesport, Havre, 306 bls. rags.
Castle & Overton, Inc., McKeesport, Havre, 297 bls. rags.
Castle & Overton, Inc., Blommersdyk, Rotterdam, 57 bls. rags.
Castle & Overton, Inc., Nevisian, Belgium, 101 bls. rags.
Castle & Overton, Inc., Winona, Italy, 187 bls. rags.
Castle & Overton, Inc., ———, Germany, 825 bls. wood pulp.
J. Anderson & Co., H. H. Asquith, Frumo, 4800 bls. wood pulp.
Johanson Wales & Sparre, Inc., H. H. Asquith, Frumo, 2100 bls. kraft pulp.
J. Anderson & Co., C. Camus, Trieste, 1983 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING JUNE 6, 1925

E. J. Keller Co., Inc., Hornfeld, Bremen, 171 bls. rags.
Baltimore Trust Co., Hornfeld, Bremen, 46 bls. rags.
E. J. Keller Co., Inc., Legie, Hamburg, 164 bls. rag pulp.
E. J. Keller, Inc., Breedyk, Rotterdam, 730 bls. wood pulp.
Castle & Overton, Inc., ———, Germany, 275 bls. wood pulp.
Johanson Wales & Sparre, Inc., Dania, Copenhagen, 750 bls. wood pulp.
National City Bank, Hornfels, Bremen, 1800 bls. wood pulp.
Lagerloef Trading Co., Argosy, Helsingfors, 333 bls. wood pulp.
Lagerloef Trading Co., Argosy, Raumo, 304 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Argosy, Sundsvall, 2500 bls. wood pulp.
Amer. Exchange Nat'l Bank, Argosy, Sundsvall, 1000 bls. wood pulp.
E. Naumburg & Co., Argosy, Sundsvall, 5400 bls. woodpulp.
Price & Pierce, Ltd., Argosy, Sundsvall, 900 bls. wood.
Pagel Horton & Co., Inc., Argosy, Sundsvall, 150 bls. wood pulp.
Parsons & Whittemore, Inc., Argosy, Sundsvall, 600 bls. wood pulp.
Bulkley, Dunton & Co., Progress, 500 bls. wood pulp.

PORTLAND IMPORTS

WEEK ENDING JUNE 6, 1925

Bulkley, Dunton & Co., Goldbek, 6632 bls. wood pulp.

Erecting Heid Storage Tanks

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., June 8, 1925.—Two massive acid storage tanks, each 9,680 cubic feet capacity, are being erected by the Kalamazoo Tank and Silo Company for the Cape mill of the St. Maurice Paper Company, Ltd., Three Rivers, Quebec. These tanks are 22 feet in diameter and 20 feet deep and have a specially constructed bottom of 8 inch timbers, with heads and staves of 6 inch stock. Long leaf yellow pine is used exclusively. Each tank has 24 hoops, contains 22,000 board feet of lumber and weight between 60,000 and 70,000 pounds. The tanks will be shipped knocked down and erected at the mills.

Larke tanks of this description are not at all uncommon with the Kalamazoo Tank and Silo Company. Recently one was constructed of 50 feet diameter of three inch stock. Vats, blow pits, stuff chests, all common in paper mill equipment are regular production with the Kalamazoo Tank and Silo Company. During the past two or three years this concern has been developing a steady sale of tile ash pits, elevated on steel frames, with a dump bottom for economical emptying.

Canadian Exhibit in New Zealand

The federal government, Ottawa, has invited various Canadian paper firms to make exhibits at the New Zealand and South Sea Exhibition at Dunedin, N. Z. this summer, the federal authorities offering to transport displays free of charge. It is likely that a number of concerns looking after foreign trade in the paper line will send consignments of paper.

Obituary

Edwin P. Lindsay

BOSTON, Mass., June 9, 1925.—Edwin Parker Lindsay, died the latter part of last month at Cambridge. He was born at Brookline, and of late years had maintained a home in Cambridge, and in Bridgewater, N. H. He was treasurer of the First Parish Congregational Church.

His whole business life had been closely identified with the manufacture and selling of paper. Through his initiative, one of the mills in which he was interested was a first American mill to manufacture kraft paper from imported pulp. Later this mill was the first to manufacture that class of pulp in this country.

Mr. Lindsay represented the highest type of business integrity, sagacity and progressiveness. Starting as a boy with Train, Smith & Co., importers of paper mill supplies, Boston, he later acquired interest in and represented as selling agent the following named companies: The Odell Manufacturing Company, Groveton, N. H.; the Brompton Pulp and Paper Company of Canada; Claremont Paper Company, Claremont, N. H.; Deerfield Pulp Company, Mountain Hills, Vt.; Aroostook Pulp and Paper Company, Van Buren, Me.; Howland Pulp and Paper Company, Howland Me.; The Advance Bag and Paper Company, Howland, Me., and Middletown, Ohio. At the time of his death he was the president and principal owner of the last named company. He is survived by his widow.

ADMINISTRATIVE AND SELLING COST

(*Continued from page 66*)

which indicates the particular contract. In other cases, the cost of goods to the Selling Controller is full works cost, including packing.

Collection of expense having been made, and distribution of all administrative expense to locations effected (as previously described) transfers may be made to the Sales accounts (debit) or Special Order Cost Accounts in total. Methods of allocation may be either on a predetermined rate per unit (quantity or value) or by actual apportionment over total units or value of product sold, according to type. Advertising in part may be distinguished in relation to product or territory (by addition of detail numbers to the Advertising Account or other Expense Account numbers concerned) when expense is initiated; otherwise it must be distributed as above mentioned. Salesmen, agents and branches ("field"), totalled according to territory, may be charged to Sales Accounts according to total sales of each product group (units or values) in each field. Storage will be distributed according to whether stores are regarded as parts of "field" expense or have relation to product groups. Transport may be charged to special orders so far as possible (e.g., sea freight, insurance, import duties, etc., on special items such as engines) or otherwise according to quantity of product group handled.

The total expenditure on special orders (including cost of product) will be transferred to the Sales Accounts carrying the credit for the relative sales; expenditure from Locations, distributed as previously mentioned, being also transferred to the relative sales accounts (to which "cost or product sold" will have been debited already, as received, and delivered to customers). The difference between total sales and total charges on Sales Accounts will be the "net margin" out of which certain further expenses (discounts to customers, bad debts and interest) must be provided. The exact treatment of Discounts and Interest is a matter on which two opinions exist; my own view is that it is not a selling *expense* in relation to product, but a matter of use of money. The total cost of sales as shown on the Product Group Sales Accounts will now include cost of product, advertising, selling ("field"), storage and transport. Where the products are sufficiently homogeneous (within each group) to have a common quantitative unit, the cost per unit of all factors of Selling Cost is thus obtainable—the number of units sold being available from statistical records—and in all cases the factors of cost may be expressed in terms of value units, or "per cent of turnover."

Paper Box Men Convene

ROCHESTER, N. Y., June 6, 1925.—The National Paper Box Manufacturers Association, had a large and most enthusiastic attendance at the National Convention convened at the Powers Hotel last week. At this gathering there were 500 representatives of the National Association and its allied industries, the Supply Trades Division.

Following the joint gathering of the Western Division with the National Convention during the half week beginning May 27 there was held election of officers these being elected:— President Frank Stone, Jesse Jones Paper Box Company, Philadelphia; Vice-President, A. G. Burry, Fort Wayne Paper Box Company, Fort Wayne, Ind. and Treasurer-Secretary, Frank S. Records. These were elected Directors:—Western Division, Harry O. Alderman; Alderman and Fairchild, Rochester, N. Y.; New England Division, Frank Barnes, W. S. Barnes and Sons, Boston, Mass.; Central Division, E. T. Franke, George Franke Sons Company, Baltimore, Md.; Southern Division, Paul A. Clements, Atlanta Box Factory, Atlanta, Ga. and Eastern Division, L. E. Walbeck, E. W. Walbeck Company, Jersey City, N. J.

Apart from the business sessions held in the Powers Hotel was the interesting exhibit made at the plant of the M. D. Knowlton Company in Rochester where the box makers were given an opportunity to view a most comprehensive display of the various kinds of mechanical equipment used in the converting and box manufacturing industries. More than 1,000 persons attended this exhibition.

On Thursday, the opening date there was shown a Business Playlet arranged by the National Headquarters as a check up on the business conduct of the box plant. It showed in movie picture form and spoken drama a candy making plant with two competing box manufacturers vieing for the business of the confectioner.

Among the speakers at the Convention were E. M. M. McCullough, Manager of the Department of Manufacturing, U. S. Chamber of Commerce, whose talk stressed the importance and value of Trade Associations and who made complimentary reference to the work of the Box Makers Association as a business promoting institution as well as medium for fraternizing the industry. Harry R. Wellman of Dartmouth College, spoke of Marketing and Advertising while Marketing Expert George F. Barber of the National Box Makers Association gave an interesting discussion on Management of the Paper Box Plant.

Social diversions were those given under the direction of the M. D. Knowlton Company, which entertained the Delegates at luncheon at the Hotel Rochester and at a Theatre Party at the Eastman Theatre. The National Supplies Association also entertained at the Theatre and with a buffet supper and dance at the Power Hotel.

The next meeting of the Divisional bodies of the National organization will be that of the Central and Eastern Divisions which will be held at Reading, Pa., September 22 and 23 at the Eagles Home on Mount Penn.

Otto Heijne Goes to Sweden

Otto Heijne, who came to this country in 1922 and entered the employ of Kimberly-Clark Company, has gone to Sweden for several months' visit and study of the developments in sulphite mills since he left there. While with Kimberly-Clark Company he was first assistant superintendent at Kapuskasing, Ontario, but for the past two years has been assistant to P. A. Paulson, general sulphite superintendent. On his return Mr. Heijne plans to open an office as consulting engineer.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, June 10, 1925.

There has been no great falling off in business in the paper market during the past week in spite of the protracted hot spell and yet the shadow of impending summer dullness has already fallen across the threshold. Orders are still coming in with fair regularity but they are small orders, the bulk of which does not total up with the business that should be coming through under normal conditions. This is typical of the cautious buying spirit which the market fell into a long time ago. Consumers hold off their orders to the last possible moment, in most cases, and then they order so small an amount that it sifts through their hands almost as soon as received. Because of this fact they are constantly ordering and reordering and the market, taking into account that multitude of orders, figures that it is exceptionally busy. It is only when figures are gone into and the volume of business is reckoned with that the market realizes that it isn't doing as well as it thought it was doing. There is no reason to believe that there will be any change. There will be none, at any rate, during the summer. Whether the fall will change the buying attitude any or whether the consumers will still cling to their cautious policy is a question that time only can decide. Some of the mills are curtailing their production in anticipation of the lesser call of summer trade. Some of them are closing down a day or two at a time and reconciling their working schedule to the actual business demand. Prices, with a few exceptions, remain undisturbed. There is not the spontaneous buying necessary to drive them to higher levels and the manufacturers are well aware that lower prices will not prove a lure to materially increased business. Not only that but complain is now being generally made as to the slight margin of profit and the manufacturers, eager as they are for business, cannot see the logic in reducing prices to such an extent that the slight margin would be wiped out.

News print prices hold steady and the demand is showing but slight falling off, although the summer period is at hand and a break is expected in the phenomenal call news print has been having. Metropolitan publishers, however, have not yet cut down their publications, advertising seems to be running as strong as ever and, as long as these conditions exist, news print will not get far away from the pace it has been holding to.

Fine papers are moving fairly well but the orders which are coming in are pitifully small. Printers appear to be reasonably busy but they have almost reached a point of caution where they only buy for a job as it comes in and keep the stock on their shelves reduced to a minimum. Prices are firm, however.

Wrapping paper prices hold up and the demand is fairly good. Tissues also hold steady and are by no means in a hopeless position. Book papers are doing surprisingly well, although the business is very unevenly distributed. Some mills are well supplied with future business while others are eagerly scanning the horizon for orders which will enable them to keep up their present working schedule.

Things are not quite so encouraging with the board mills. Business is dropping away, although the Eastern mills seem to be doing better than those in the West.

Mechanical Pulp

No change is reported in the mechanical pulp market. There is a well established demand although a greater portion of the business is of the contract nature. Working conditions are such that the production is proceeding satisfactorily and prices are still firm.

Chemical Pulp

Chemical pulp has showed no change but the market is in good condition with prices steady. Business is not particularly animated which is largely due to the fact that consumers are now receiving quantities of supplies from abroad.

Old Rope and Bagging

The demand for roofing materials has brought new strength to the bagging market and the demand appears to be growing better daily. Old rope has shown a slight improvement, the prices holding where they were a week ago.

Rags

The leading demand in rags just now is confined to the lower grades. The mill call is particularly good and while there has been no radical change in the prices the schedule is holding strong and a rise in certain items seems imminent. The call for the higher grades is limited, the business which is coming in being restricted to immediate needs.

Waste Paper

While business in the waste paper market cannot hardly be called flat it is strongly inclined that way. The orders are hardly sufficient to keep the supplies moving and there is every indication that price cutting and concession giving are becoming prevalent. Prices are low but, in many cases they are being shaded to procure business.

Twine

Twine is at a standstill. Orders are few and far between and buying is always a matter of necessity when orders are placed. It begins to look as though the summer would be as slow with the twine men as was the summer of 1924.

Pioneer Paper Co. Experiments

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, Cal., June 4, 1925.—An exhaustive series of experiments have been inaugurated by the Pioneer Paper Company, Inc., in an effort to confirm results of the recent tests in England on the suitability of waste cotton bolls in the manufacture of course papers. The tests in England revealed the interesting fact that waste cotton bolls could be utilized in the production of an excellent grade of coarse brown wrapping paper.

The Pioneer company's chemists are endeavoring to find a practical use of waste cotton stalk hulls available in the Imperial Valley and other cotton growing districts of the southwest. Experiments have indicated that these can be utilized to advantage. Imperial Valley bolls have been found to be too brittle for practical use. An effort will also be made to find a use for rice stalks.

Max E. Campbell, chemist in charge of the experiments, reports that results so far are favorable.

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ENGLISH WEAVE

In Two, Three, Four, Five and Six Ply, 60 inches to 176 inches in width.

BY ACTUAL TEST this felt will dry 33 per cent more paper, with ABSOLUTELY NO FELT MARKS IN THE PAPER.

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THREE PLY FELT for other paper

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For reliable running and average long life

LINDSAY FOURDRINIER WIRES

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, June 10, 1925.

With the abrupt plunge into extreme hot weather, which marked the past week, it would be unreasonable to look for anything in the way of real record business in the chemical market. As a matter of fact there was a falling off in demand and the whole market responded to the realization that the hot weather period is really here, that it will be many weeks probably before it is broken and that from now on there will be little to do but plod on and mark time. Vacation schedules are being made out and the ranks in the sales departments will begin immediately to thin, the members taking advantage of this period when their efforts produce the least results and when they can best be spared. Prices are holding up well and schedules are being fairly well maintained. Reports of concession granting become more frequent but it is usually found upon investigation that actual cases where concessions are being given are not frequent. It is probable that buyers may find an opportunity to buy where the prices are shaded a trifle below those given in this department. In nearly every instance of the kind, however, such concession is made to move a spot lot and the price cannot be taken as ruling the market. Manufacturers have set their faces solidly against any price reductions for they are satisfied that business exists only in a limited quantity and that no more business would be forthcoming if the price was dropped. Therefore they would be the losers and they do not intend to get caught in that predicament. Many mills are cutting down their working schedule and are already trimming the edges for the summer months. At the end of this month the chemical men will be able to copare their figures for the first six months of last year with the first six months of 1924. It is believed that the total will not show any but a slight variation either way. The efforts of the manufacturers will from now on be directed to a sufficient curtailment of production to prevent any ungainly accumulation of stock during June, July and August.

BLANC FIXE.—There was little spontaneity in the blanc fixe demand the past week. The consumers are taking no anxious thought of the morrow and will not buy ahead. The orders which drift along are regulated by their immediate necessities. Further than that they are not interested. The demand, however, is not far from the normal for this time of the year. From $60 to $70 a ton is being asked for the pulp and from $75 to $90 a ton for the powder.

BLEACHING POWDER.—There has been an easing off in bleaching powder and with the hot weather period on in full blast it may be expected that the demand will slacken materially. Hand to mouth buying rules the market but the manufacturers still hold to their schedule and show that they have no intention of giving ground. The consumers are buying only for immediate needs, and, as their immediate needs are not great, bleaching powder is not doing any too well. The price is still 1.90 cents a pound.

CAUSTIC SODA.—Caustic soda is holding up well although the past week saw a slight slackening up in its pace. It is, however, doing much better than most of the commodities right now. There is not a great deal of available stock and the demand is sufficient to take care of this. The price is from 3.10 to 3.15 cents a pound.

CASEIN.—Casein, which has been doing so nicely, participated in the general slump of the week. There is a consistent demand, however, and, everything considered, th market here is satisfactory. The market quotes 12½ cents a pound, although this may have been shaved a little in certain cases.

CHINA CLAY.—Such weakening as occurred in China clay during the week could plainly be traced to the weather conditions and is temporary. There is nothing fundamentally wrong and, while the market will probably weaken considerably, China clay, which has been doing nicely for weeks, will show pretty satisfactory results for some time. From $16 to $20 a ton is being asked for the imported grades and from $12 to $15 a ton for the domestic.

CHLORINE.—Chlorine had a quiet week and has, in fact, been doing a little less than has been expected of it. It is quoted at from $4.50 to $7.00 a pound in tanks.

ROSIN.—Even the hot weather failed to put a serious dent in the rosin demand. Rosin has been doing so exceptionally well for so long a period that a falling off is in order. While the price changes from day to day it does not get far away from the price of $6.90 to $7.10 quoted at the naval stores centers.

SALT CAKE.—Salt cake, one of the first to feel the shock of the hot weather, has dropped in price and sales are now being sought at a considerably lower schedule. While contract business has been good, the spot buying has practically been nil. Production has been curtailed during the past few weeks and that is all that is keeping the stock from piling up. It is said to be selling quite freely at $15 a ton although the market is quoting from $16 to $17 a ton.

SODA ASH.—Soda ash participated in the general falling off in business. There has been steady improvement in this commodity during the past few weeks but the wilting period has called a halt on it. The price is holding at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of alumina had a moderate demand last week and is still doing as well as can be expected under the conditions. There is no concession giving to speak of. The commercial grades are bringing from 1.40 to 1.45 cents a pound at the Eastern works and the iron free at from 2.10 to 2.25 cents a pound.

SULPHUR.—Routine contract business at the customary figure is the story regarding sulphur. The quotation is from $18 to $19 a ton.

TALC.—Talc found itself dropping ground last week but it is in better shape than it was a year ago at this time. From $17 to $18 a ton is the price which is being asked.

P. O. Dept. Substitutes News Print for Manila

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 10, 1925.—Substitution of news print for manila paper for use as facing slips will result in a saving of approximately $19,000 for the next fiscal year, acting Postmaster General Henderson, today advised General H. M. Lord.

Credit for the suggestion accomplishing the saving goes to J. H. McAllister, storekeeper, Division of Equipment and Supplies of the Post Office Department, to whom an award of $100 has been recommended by the Committee on Awards.

In order to determine the merit of Mr. McAllister's suggestion, on the last proposal for 14 carloads of slips, bids were asked on both news print and manila paper. An award based on these bids has been made and news print is to be supplied, at a saving on this particular order of more than $5,000. The price per million slips was $57.15 for manila and $42.28 for news print. The news print slips have been substituted in both the post office service and in the opinion of all consulted will serve equally as well as the so-called manila.

Upkeep of Paper Mill Rolls

An interesting and instructive booklet has been issued by the Lobdell Car Wheel Company of Wilmington, Del., which relates to the care and upkeep of paper mill rolls. The facts compiled in this booklet, which contains computing tables, are based on years of experience in the manufacture of chilled rolls. Very little information has ever been published on this subject and the information this booklet contains should be in the hands of every paper and pulp mill employee.

A copy will be sent free to anyone writing for it.

KVP

Papers:

Genuine Vegetable Parchment

For wrapping all moist and greasy foodstuffs.

Bread Wraps—Waxed Papers

For tight-sealing cartons and wrapping dry foods.

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All standard sizes, weights and colors.

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Prices on M-E pulverized clay may surprise you even considering this additional treatment.

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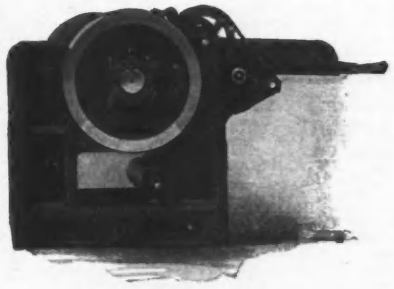

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Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	100	102*
Advance Bag and Paper, 7s 1943	98	100*
Aroostook Pulp and Paper, 6s 1925	99	...
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	93	95
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	92	95
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	101
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	98	101
Brown Company Serial, 6s 1925-43	97	100
Central Paper, 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	99	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	97	100*
Chicoutimi Pulp Co., 6s 1943	63	...
Donnaconna Paper Co., Ltd., 6s 1940	99	101
Eddy Paper, 7s 1931	97	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	85	...
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co, 7s 1942	95	99
Eddy Paper Co., 7½s 1931	95	...
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hercule Corp'n, 8s 1936	98	101
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	90	97
Kenmore Pulp and Paper Co., 6s 1937	89	...
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
Mengel Company, 7s 1934	101	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	101	103*
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	100	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	97	99
Parker, Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	100	102
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	115	118
Riordan Paper, 6s 1924	91	94
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	96	98
Smith (Howard) Paper Mills, 6s 1934	96	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	88	92
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	107	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
Whittaker Paper, 1st 7s 1942	95	...
Watab Paper Co., 6½s 1942	101	...
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	87	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	66	68
Abitibi Power and Paper, Pfd	108	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com	5	7
Beaver Board, Pfd	38	41
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Brompton Pulp and Paper, Cap	24	25
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Pfd	95	100
Great Northern Paper, Cap	255	265
Jessup & Moore Paper, Pfd	71	73
International Paper Co., Com	67	68
International Paper Co., Pfd	79	82
Mengel Company, Com	54	56
Mengel Company, Pfd	78	...
Oxford Papers, Com	93	97
Oxford Paper Co., Pfd	98	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	38	39
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	86	87
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	104	105
Spanish River Pulp and Paper, Pfd	115	117
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	44	47
West Virginia Pulp and Paper, Pfd	85	100
Whittaker Paper, Com	50	...
Whittaker Paper, Pfd	13	...

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.70	@ .90
Colored	1.00	@ 2.00
White No. 2	.65	@ .75
Anti-Tarnish	1.25	@ 2.50
Kraft	.85	@ .95
Manila	.70	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	4.50	@ 4.75
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.25	@ 9.50
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 6.00
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.50	@ 2.75
S. Screening	3.00	@ 3.50
Card Middler	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mla. Ll. Chip	60.00	@62.50
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	33.00	@37.00

(F. o. b. Mill)

No. 1 Domestic	28.00	@32.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	2.90	@ 3.25
No. 1 strong unbleached	2.75	@ 3.25
No. 2 strong unbleached	2.45	@ 2.80
No. 1 Kraft	2.95	@ 3.20
Sulphate—		
Bleached	3.75	@ 3.95

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.75	@ 4.50
Easy Bleaching Sulphite	2.90	@ 3.25
News Sulphite	2.55	@ 2.80
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	2.75	@ 3.25
Soda Bleached	4.00	@ 4.25

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.50	@15.25
New White, No. 2	8.00	@10.00
Silesias No. 1	10.50	@11.50
New Unbleached	14.00	@15.00
Washables	6.50	@ 9.25
Fancy	975	@10.25
Blue Overall	10.25	@11.25
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	5.75	@ 6.50
Pink Corset Cuttings	10.50	@11.00
Pink Muslin	10.25	@10.75
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	6.50	@ 7.50
Men's Corduroy	6.25	@ 6.75
New Mixed Blacks	4.00	@ 4.50

Old Rags

White, No. 1—		
Repacked	6.50	@ 7.50
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.75	@ 5.25
Miscellaneous	4.00	@ 4.50
St. Soiled, White	3.00	@ 3.50
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.25	@ 3.50
Black Stockings	4.00	@ 4.50
Roofing Rags—		
Cloth Strippings	3.15	@ 3.25
No. 1	3.15	@ 3.25
No. 2	2.85	@ 3.05
No. 3	2.00	@ 2.25
No. 4	2.75	@ 2.85
No. 5A	1.80	@1.50

Foreign Rags

New Light Silesias	9.50	@10.50
Light Flannelettes	11.00	@12.00
Unbl'ched Cottons	14.00	@15.00
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@11.00
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.75
New Dark Cuttings	4.00	@ 4.10
No. 1 White Linens	10.25	@11.25
No. 2 White Linens	7.50	@ 8.50
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.75
Ord. Light Prints	3.75	@ 425
Med. Light Prints	3.75	@ 4.25
Dutch Blue Cottons	4.00	@ 4.50
Ger. Blue Cottons	4.00	@ 4.25
Ger. Blue Linens	425	@ 4.75
Checks and Blues	3.50	@ 3.75
Linsay Garments	2.60	@ 2.70
Dark Cottons	2.50	@ 2.60
Shoppery	2.40	@ 2.50
French Blues	4.00	@ 4.50

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.10	@ 3.25
Domestic	3.15	@ 3.25
Wool Tares, light	2.60	@ 2.70
Wool, Tares, heavy	2.70	@ 2.80
Bright, Bagging	2.55	@ 2.65
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.10	@ 2.20
Roofing Bagging	1.70	@ 1.90
Manila Rope—		
Foreign	6.25	@ 6.75
Domestic	6.75	@ 7.25
New Bu. Cut	3.50	@ 3.75
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.60
Hard, White, No. 2	3.15	@ 3.40
Soft, White, No. 1	2.70	@ 2.80
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag	1.25	@ 1.40
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.45	@ 2.60
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	.70	@ .90
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.00	@ 2.10
News—		
No. 1 White News	1.90	@ 2.05
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.75	@ .85
No. 1 Mixed Paper	.55	@ .65
Common Paper	.35	@ .45

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.56	@ .61

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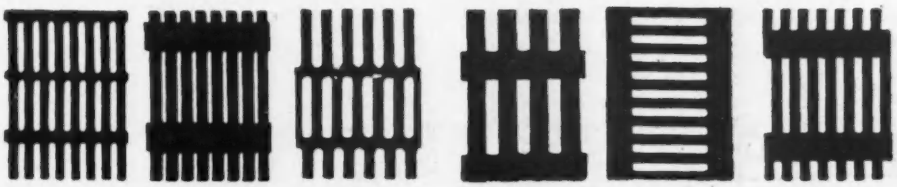

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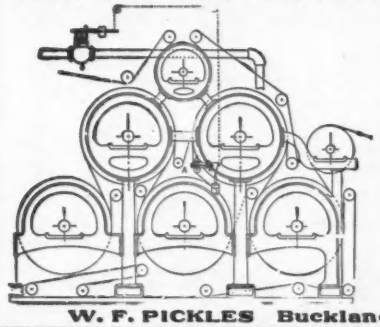

Reasons why you should have it on your machine are: First, it regulates the drying of paper automatically, irregularities are eliminated; second, higher machine finished papers are attainable, because it is possible to maintain the proper quantity of moisture in sheet, as it passes to calenders; third, mills having tried it on one machine have ordered it for all their machines. Full particulars upon application to

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Finished Jute—			
Dark, 18 basis	.30	@	.31
Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.20	@	.23
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger.	.15	@	.17
Fine Tube Yarn—			
5-ply and larger.	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India— Basis	.14	@	.15
Paper Makers' Twine Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Amer. Hemp, 6	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1. Rag Bon	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7	@	10¼
Sulphite Ledger	9½	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5½	@	7½
No. 1 S. & S. C. Book	6½	@	7¾
Coated Book	8	@	10
Coated Label	8	@	10
News—Roll, mill	3½	@	4¼
News—Sheets, mill.	3¾	@	4¼
No. 1 Manila	4½	@	5½
No. 1 Fibre	4½	@	5½
No. 2 Manila	3¾	@	4¼
Butchers' Manila	4	@	4½
No. 1 Kraft	5¾	@	6¼
No. 2 Kraft	4.50	@	5.00
Wood Tag Boards	4¼	@	6
Sulphite Screenings	3.00	@	3.25
Manila Tissue, 24x36 sheet	7½	@	8
White Tissue, 20x30 sheet	7	@	7¼
Boards, per ton— (Delivered Central Territory)			
Plain Chip	45.00	@	47.50
Solid News	47.50	@	50.00
Manila Line Chip	57.50	@	60.00
Container Lined— (Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.15	@	3.25
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.65	@	2.75
No. 1 Mixed	1.45	@	1.50
No. 2 Mixed	1.15	@	1.20
Ledger and Writings	1.50	@	1.55
Solid Books	1.40	@	1.45
No. 1 Light Books	1.00	@	1.05
Blanks	1.90	@	1.95
Kraft	2.05	@	2.10
New Kraft Cuts	2.30	@	2.35
Manila Envelope Cuttings	2.40	@	2.50
Ex. No. 1 Manila	2.00	@	2.10
Print Manila	.90	@	.95
Folded News (over-issue)	.85	@	.90
Old Newspapers—			
No. 1	.70	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.55	@	.60
No. 2	.50	@	.55
Straw Clippings	.75	@	.80
Binders' Clippings	.70	@	.65
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	30.00	@	35.00
No. 2	28.00	@	33.00
No. 3	26.00	@	31.00
No. 4	20.00	@	25.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.08½	@	.12
Rag Content	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.05	@	.07
Book, Super	.09	@	.14
Book, Super	.08½	@	.13
Book, Coated	.09	@	.20
Coated Litho	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1.	.11	@	.12
Manila, Sul. No. 1.	.05	@	.05
Manila, Sul. No. 2.	.03½	@	.04¼
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.05½	@	.05½
Common Bogus	.03½	@	.04
Straw Board	—	@	50.00
News Board	—	@	45.00
Chip Board	—	@	42.50
Single Manila Pulp lined board	60.00	@	65.00
Single White, patent coated board	77.50	@	85.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	4.25
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	.04½	@	—
No 2 Soft White	.03¼	@	—
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	2.25
Writing Paper	—	@	1.70
No. 1 Books, Heavy	1.75	@	1.85
No. 1 Books, Light	—	@	1.50
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	1.20
Old Newspapers	.70	@	.75
No. 1 Mixed Paper	.60	@	.65
Box Board, Chip	.60	@	.65

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3¼
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	2½
Scrap burlaps	—	@	3.00
Wool Tares, heavy.	—	@	3.00
Mixed Strings	—	@	2.25
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1	.11	@	—
New Unbleached	.14¾	@	.15
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls	.12½	@	—
New Black, soft	.07	@	—
Khaki Cuttings	.07	@	—
Corduroy	.04	@	.04½
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1	10.00	@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	3.90	@	—
No. 2	3.00	@	—
No. 3	2.50	@	—
No. 4	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¼	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1.	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05½
No. 1 Kraft	.06¼	@	—
Common Bogus	.02¾	@	—
Straw Board	56.00	@	55.00
News Board	42.50	@	—
Chip Board	42.50	@	—
Wood Pulp Board (Carload Lots)	4.50	@	5.00
Binder Boards—			
Per ton	75.00	@	80.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps	2.25	@	2.50
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.75	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.75	@	—
No. 1 Mixed	1.00	@	1.10
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.25	@	—
No. 2 Books, light	1.00	@	—
No. 1 New Manila	1.50	@	1.75
No. 1 Old Manila	1.25	@	1.50
Container Manila	.85	@	.90
Old Kraft	2.00	@	2.10
Over issue News	.90	@	.95
Old Newspaper	.40	@	.50
No. 1 Mixed Paper	.40	@	.50
Common Paper	.30	@	.35
Straw Board, Chip	.60	@	.65
Binders Bd., Chip	.60	@	.65

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06½	@	—
Silesias, No. 1	.10½	@	.11
New Unbleached	.14	@	.14½
Washable	.07¼	@	.08¼
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall	.11	@	.11½
New Blue	.04	@	.04¼
New Black Soft	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05¼

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous	.04¾	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.15	@	3.25
Black Stockings	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.13
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite)	—	@	.13
Ledgers No. 1	.36	@	—
Ledgers No. 2	.27	@	—
Writing	.09½	@	—
Writing S C	.10	@	—
News f. o. b. Mills—			
Rolls (carloads)	3.50	@	—
Sheets (carloads)	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	29.00	@	30.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	80.00
Sulphate	62.50	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.60	@	—
Soft White Book shavings	3.25	@	—
White Blk, News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.00	@	—
Kraft	2.10	@	2.10
News and Scrap—			
Strictly Overissue	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	.55	@	—
Domestic Rags— Price to mills, f. o. b. Toronto	Per lb.		
No. 1 White shirt cuttings	.15	@	.15¼
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¾